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I.—CONCERNING “REASON” IN HUMAN AFFAIRS.

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It may be unfair to Lord Russell to take, as the starting-point of an argument, a few passages from an article originally contributed by him to the *Atlantic Monthly*. But, the fact that the same article has appeared also in the *Political Quarterly*, and, under a different title, been reprinted in his *In Praise Of Idleness*, goes to show that it expresses his considered convictions. In any case, Lord Russell's claim, in this essay on “The Ancestry of Fascism”,¹ that Fascism and similar movements exhibit a “growth of unreason” and a “revolt against reason”, as compared with, say, the “outlook of two hundred years ago”, helped to crystallise my own reflections on this question of reason in human affairs. I make, therefore, no apology for taking Lord Russell's views as my text and building an argument upon them.

“Reason” is defined by Lord Russell as having three characteristics. For convenience of subsequent reference, I shall number these characteristics as so many principles. Principle 1 is that reason, unlike, *e.g.*, the Inquisition, “relies upon persuasion rather than force”. Principle 2 is that reason, unlike, *e.g.*, British propaganda during the Great War, “seeks to persuade by arguments which the man who uses them believes to be completely valid”. Principle 3 lays down that reason “in forming

¹ Bertrand Russell, *In Praise of Idleness and Other Essays*, chap. v.

opinions, uses observation and induction as much as possible and intuition as little as possible".¹ What is meant by "intuition", I may illustrate, to parallel Lord Russell's own amusing example, by a sentence culled from a reader's letter in a Johannesburg newspaper: "Our antipathy to colour is a manifestation of Divine purpose, and God help South Africa if we relax our prejudice".

It will be noticed that these three principles deal with "reason" in different aspects, or contexts. Principle 3 is concerned with reason in the formation of one's own opinions. Principle 1 is concerned with communicating one's opinions to others, with inducing others to accept one's opinions. Of Principle 2, I am not sure whether its point is the requirement that one's arguments should be completely valid, or the requirement that one should believe them to be completely valid, whether they are so in fact, or not. On the latter reading, the principle demands merely *bona fides* in the persuader: it excludes the use of arguments in which one does not believe oneself; it forbids one to dupe others by the use of arguments which one knows will persuade them, but which one regards as false oneself. Accepting this latter reading of Principle 2, the requirement of the actual validity of one's arguments is, presumably, covered by Principle 3; for observation, in the name of "reason", must surely be accurate, and the inductive inferences from it as "valid" as it is possible for inductive reasoning to be. Whether, in fact, observation and induction, in any sense which these words can normally bear, are adequate for the formation of the opinions with which we are here concerned, is a question to which I shall return below.

Meanwhile, it is more important to note that the task of persuading others requires something else besides *bona fides* and the avoidance of force. This further requirement—I will call it "Principle 4"—is added by Lord Russell himself in a subsequent passage: "Reliance upon reason, as thus defined, assumes a certain community of interest and outlook between oneself and one's audience".² In more technical language, if I want to persuade another by argument, not only must my conclusions follow validly from my premisses, but my premisses must be accepted also by the other. Now, if these common premisses are not already shared by the other, the problem arises, how I am to communicate them to him. By further argument? This would only push the difficulty a step further back, for such argument,

¹ *Loc. cit.*, pp. 86, 87.

² *Loc. cit.*, p. 87.

to be successful, would require anterior common premisses already established between us, or else a method of establishing common premisses without argument.

This question of how to establish common premisses, which seems to me to be very important in a discussion of our problem, Lord Russell skirts but does not face on its merits. He points out, rightly enough, that you cannot hope to persuade opponents who differ from you on principle, *i.e.*, between whom and yourself there are no common premisses, no "community of interest and outlook". He argues that "the appeal to reason is easier when power is unquestionably confined to an oligarchy", as it was in 18th cent. England. In other words, the method of persuasion requires a society homogeneous in interest and outlook, sharing the same opinions on fundamental matters; and homogeneity of this sort is more easily found in a small group. On the other hand, "as the political constituency grows larger and more heterogeneous, the appeal to reason becomes more difficult, since there are fewer universally conceded assumptions from which agreement can start. When such assumptions cannot be found, men are driven to rely upon their own intuitions; and since the intuitions of different groups differ, reliance upon them leads to strife and power politics".¹

I must confess to being puzzled by some points in this passage. Lord Russell's purpose, I would recall, is to illustrate the degeneration from former "reason" to present "unreason" in human affairs. Now, granted that the 18th cent. British aristocrats had sufficient community of outlook among themselves to be able to persuade each other, they certainly did not rule the people of England by the method of persuasion or the "appeal to reason". Looking at England as a whole, therefore, I do not see how their rule can be quoted as a conspicuous example of the rule of reason. Or, if it can, I fail to see why the rule of Italy by a homogeneous oligarchy of Fascists should be condemned by Lord Russell as a conspicuous example of the rule of unreason.

Moreover, though the aristocratic oligarchy is presented to us as practising the appeal to reason, it is not suggested that they formed their opinions by "observation and induction", and thus satisfied Principle 3 of Lord Russell's canon of reason. On the contrary, they based their appeal to reason on common "assumptions", and no question is raised whether these assumptions were reasonable or unreasonable. Yet "assumptions" are presently contrasted with "intuitions" in a way which, in the context, can

¹ *Loc. cit.*, p. 88.

only suggest that for a group to rely on common "assumptions" is somehow a mark of reason, whereas for it to rely on common "intuitions" is somehow a mark of unreason.

Surely all this is more confused and confusing than one has a right to expect from an advocate of reason. And the only solid point in the passage is the undeniable truth that groups without common premisses cannot persuade each other and are thus reduced to strife and power politics. But, this truth stands, whether, as in 18th cent. England, one group is unquestionably dominant and the other, or others, meekly submissive and held in subjection by fear, or whether the groups are active rivals for power. In neither case is the method of government one of persuasion according to Lord Russell's recipe. Both systems should be classed by him as different examples of the rule of unreason.

I return, however, to the topic of assumptions *v.* intuitions. What sort of assumptions or intuitions has Lord Russell here in mind? The following pages of his essay show that he is thinking of assumptions or intuitions concerning the "ends" which "statesmen" (or groups in power?) should pursue. That the ends pursued by the leading statesmen of different nations, or different parties in different nations, differ is obvious. But, can we say that one end is intrinsically more reasonable than another? If so, the difference between reason and unreason in the government of men will depend on the ends which they pursue.

Or, more precisely, a government will rule by reason when (a) the ends which it seeks to realise are reasonable ends; and (b) when it "persuades" the people to support it in pursuing these ends. It seems plausible even to suggest that it will be easier to persuade people to adopt an intrinsically reasonable end, whereas an intrinsically unreasonable end will require to be imposed on people by force and "propaganda".

Something like this is, I suspect, the view which Lord Russell would like to hold. He hankers after some way of distinguishing between ends which are rational and ends which are irrational. He has his own preferences about ends and would like to say that the ends which he prefers are the ends approved by "reason". Thus he contrasts two sets of ends, one of them preferred by "irrationalists", like Fascists, the other appealing to men like himself: "They (scil. the Fascists) seek the good in *will* rather than in feeling or cognition; they value power more than happiness; they prefer force to argument, war to peace, aristocracy to democracy, propaganda to scientific impartiality".¹ My prefer-

¹ *Loc. cit.*, p. 91. Lord Russell's italics.

ences happen to coincide with Lord Russell's, and I, too, would like to think of them as endorsed by reason. But how is this to be made out?

At first, it seems impossible. Taking, as the example of an irrationalist end, Nietzsche's proposal that the end should be the production of great individuals, Lord Russell remarks: "This conception of the end, it should be observed, cannot be regarded as in itself contrary to reason, *since questions of ends are not amenable to rational argument*. We may *dislike* it—I do myself—but we cannot *disprove* it any more than Nietzsche can prove it".¹ Presumably, we have here a difference of fundamental "assumption" or "intuition", for, clearly, there is no suggestion of "observation and induction", which, according to Principle 3, are the rational way of forming an opinion. Lord Russell's "dislike" of Nietzsche's end seems, therefore, by his own showing to be as irrational as the great irrationalist's own preference for it.

However, Lord Russell immediately goes on: "There is, none the less, a natural connection (*scil.* of Nietzsche's end) with irrationality, since reason demands impartiality, whereas the cult of the great man always has in it as its minor premise the assertion: 'I am a great man'".²

If I say that this argument fails completely to persuade me, and that it ought not to carry conviction to anybody, I hope I am not writing myself down as being beyond the pale of reason. Lord Russell insinuates that Nietzsche used his belief in his own greatness as an argument for the conclusion that all great men are worth while and that society should be so organised as to produce great men. If Nietzsche had so reasoned, his reasoning would certainly be invalid and, thus, irrational. But, Lord Russell's actual charge against Nietzsche is not one of invalid reasoning, but of "partiality". He treats him, I take it, as an example of the general human bias by which most men approve of the kind of human being they are, and assume that what they like, deserves to be liked or ought to be liked. If this bias were to be translated into an argument: 'I am so-and-so: therefore it is good being so-and-so'; or: 'I like this, therefore this is worth liking', the fallacy would be obvious, being, in fact, the famous fallacy which Mill is accused in the Logic text-books of having committed in trying to prove that 'pleasure is good'. But, on the other hand, approvals of any sort, even self-approvals, and again all likings and dislikings, must surely be treated as *prima facie*

¹ *Loc. cit.*, p. 90. The italics of "since . . . argument" are mine; the rest are Lord Russell's.

² *Ibidem.*

intimations of value. If the judgements of value in which these preferences on reflection express themselves are treated as tentative, as hypotheses to be confirmed or rejected in the light of further experience, then there is nothing irrational in the "argument". To say: 'I like this, therefore this *may be* worth liking', or: 'I approve this, therefore this *may be* really valuable', is not, I submit, illogical or irrational. It is merely to translate value-experiences into value-judgements, and so long as the judgement is not categorically affirmed, but held subject to criticism or confirmation, reason has in no way been offended. Moreover, the value of greatness in human nature can, fortunately, be appreciated even by those who are not great, and therefore the question whether the production of great men is a reasonable end for human society remains to be examined on its merits. It is not disposed of as unreasonable merely on the ground that Nietzsche got at it, if indeed he did so, from a belief (illusory or otherwise) in his own greatness. If a proposition could be disposed of by this sort of criticism of the person who propounds it, then in the same way Lord Russell's own principle that "reason demands impartiality" might be brushed aside on the ground that Lord Russell is himself (or, at least, believes himself to be) an impartial man.

If I have criticised Lord Russell's argument, it has been with no intention of inferring that the position he seeks to maintain is untenable. I agree with his conclusion though I find fault with his argument. My point is that he has spoilt a good case by arguments which are needlessly frivolous and, using the word in its original sense, impertinent. I shall, therefore, attempt to express in my own way the kind of argument which I conceive to be relevant to a discussion of the question, whether in ends and methods certain modern forms of government are less reasonable than others.

Let me begin by recalling that, in analysing Lord Russell's account of "reason", I pointed out that he distinguishes between reason as a method of forming opinions (Principle 3), and reason as a method of communicating one's opinions to others (Principles 1, 2, 4). So here: I shall distinguish between the question, whether there is a reasonable way of reaching a conception of the ends to be pursued, or of choosing between alternative ends; and the question, whether there is a reasonable way of inducing others to devote themselves to the same ends.

It is not necessary for my argument to trace human action back into its biological roots in reflexes, or in instinctive responses to various kinds of stimuli. We can safely begin at the top, by

noting that every human adult lives according to a pattern of preferences and avoidances, mostly habitual, and rarely fully thought out. In detail, every action in which preference or avoidance, desire or aversion, embodies itself, has at its core what, on reflection, is formulated as a judgement of value or disvalue. These judgements are all either incipient or explicit generalisations. In every 'this is good (or bad)' lurks the generalisation 'this kind of thing is good (or bad)'. In other words, every "particular" action is an instance of an incipient, or fully formed, rule so to act on all occasions of that kind, though the rule may not be consciously formulated, and anyhow is really effective as a "rule" only when it has become a habit of so acting. So far, I have stated the principle with the individual as the point of application.

But, the same principle applies also to groups, societies, organisations of individuals. A group, as such, has its patterns of preferences and avoidances. Its actions as a group, the type of ordered group-life which it maintains for its individual members, as well as the conduct of its members when acting according to their position and duties in the organisation, contain their own system, or scale, of value-judgements, *i.e.*, of values recognised by the group. The group aims at preserving and maximising, in terms of its system or scale, certain values (goods), and at preventing or minimising certain corresponding disvalues (evils).

For a group to do this successfully, its individual members have to conform to the group-pattern. The minimum of conformity is conformity in "outward", public, observable conduct. The desired maximum of conformity is conformity alike in outward conduct and in "inner" conviction, through the individual's whole-hearted acceptance of the established values and preferences. That individuals may conform outwardly without inner conviction, we all know: and they will do so from a variety of motives, including "compulsion", *i.e.*, fear of "force", as well as desire for conformity, as such, *i.e.*, appreciation of the value of unity within the group. In general, no society can depend on outward conformity alone; nor can it hope to be really stable, if the prevailing motives for conformity are, like fear of force, divorced from direct appreciation of the group-system of values. Somewhere among its members, there must be an inward core of conviction which sustains the social system, even if this conviction is attenuated in many instances into mere preference for union over disunion (*i.e.*, the refusal to push dissent to the point of civil disobedience, rebellion, or civil war); or into the thought that citizen-duty requires one to obey a law even though one

disagrees with it, or to carry out a policy, constitutionally adopted, even though one thinks it unwise.¹

But, though such attenuated loyalty, supported at its outer fringes by compulsion, may suffice to hold a society together, its living drive requires enthusiastic devotion to, and approval of, the system of values for the realisation of which the society exists. Such loyalty is facilitated when the society provides a "constitutional" method for the expression of criticisms and the effecting of amendments; a method of ventilating and adjusting differences of opinion about the social pattern of preferences, *i.e.*, about the values which the established order claims to aim at and to realise, and by which it justifies itself to its members.

We come in sight here, I suggest, of at least *one* sense in which one system of social values can be said to have more "reason" in it than another. In other words, I would support Lord Russell's attempt to distinguish between rational and irrational societies by saying that one society is more rational than another, if (a) the convinced support of its characteristic pattern of values is wide-spread throughout its membership—if it is supported by "public opinion"; and (b) if differences about its pattern of values are settled by "constitutional methods," *i.e.*, by discussion and vote, not by violence and compulsion.

The first of these two conditions satisfies Lord Russell's requirement of a "certain amount of community of interest and outlook" (Principle 4). It stamps as irrational those societies in which the living conviction is confined to a small section that imposes conformity on the majority by force. The second condition satisfies, so far as it is possible to do so, the requirement of reliance on persuasion rather than on force (Principle 1). The qualification, "as far as it is possible to do so", is intended as a reminder that, in practice, persuasion cannot hope to achieve the complete intellectual conviction of every member of the group (not even if the group be a small committee of persons representing different

¹ As above formulated, the description of "attenuated" conviction applies only to full "citizens" of states, interpreting their own status and obligations as persons possessing political rights. It does not apply to persons without such rights and definitely segregated from the citizen-body, persons who are not *Buerger* (citizens), but mere *Untertanen* (subjects) or *Staatsangehoerige* (persons-belonging-to-the-state), like the Jews in Nazi Germany, or the bulk of the Bantu in the Union of South Africa. For such as these, the relation to the value-system embodied in the state is of the most tenuous and indirect kind. They must conform to, and obey, the state—for they are caught in it, and generally cannot escape from it except by death. If they would live at all, they must live by accepting subjection without rights of citizenship.

points of view), nor can social action wait upon total unanimity (except in the Council of the League of Nations which, in consequence, rarely acts at all!). And, again, the practice of the established system of values cannot be at once suspended in respect of every detail from which any member of the group happens to dissent. In short, a value which must rank very high in the pattern of values of a society which is "rational" in the sense defined, is the unity and coherence of the society itself, giving rise to a will to maintain the society in spite of one's dissatisfaction with certain elements in its total value-pattern. By this test, a society will be irrational in which the bulk of members conform, not from loyalty and conviction, but from fear; and, again, in which a change in the established value-pattern can be effected only by violence and revolution, not by "persuasion" (even in the somewhat Pickwickian sense above discussed).

But, of course, a society which is rational, or practises the method of reason, in the sense so far discussed, is not necessarily "rational" in the sense that the value-pattern to which, effectively and with conviction, it gives its allegiance is itself rational. Thus, *e.g.*, to borrow one of Lord Russell's examples, a society which prefers war to peace and organises itself for success in war, may be rational in the above sense, if (a) the majority of its members are genuinely war-minded, and (b) the small minority of pacifists in its ranks is allowed to express, and argue for, its dissenting opinion, but in actual conduct submits loyally to conscription and patriotically supports any war, just or unjust, in which the state may become engaged. But, before I turn to this final question, whether one end can be more rational than another, something must be said about "propaganda."

The topic of propaganda is relevant, because the community of interest and outlook which Lord Russell himself admits to be necessary for a rational society, must somehow be established; and even those who would change that common outlook in some respect must have a method of spreading their views and getting them accepted. Now, for neither purpose will "persuasion", as defined by Lord Russell, serve in actual practice. The reason, as I conceive, is that what has to be communicated, or made common, is preferences and avoidances in conduct with the value-judgements implied in them, and such communication, whether from adults to adults, or from adults to children, cannot rely on persuasion, in Lord Russell's sense of the word.

Lord Russell, with memories of war-propaganda in mind, uses "propaganda" only in the sense of duping and deceiving people

into believing something which the propagandist himself knows to be false. By contrast, persuasion becomes the propagation of truth. But, I would suggest that propaganda and persuasion must be discussed without reference to the truth or falsity of that which is being communicated. Propaganda may be used in the cause of truth, whilst, on the other hand, a man may seek to persuade others of what is, in fact, false, though he does not know it to be so. Given *bona fides* (Lord Russell's Principle 2) in both propaganda and persuasion, the question of actual truth or falsity becomes irrelevant.

On this understanding, I would plead that there is a sense of "propaganda" in which one can say that without propaganda no society can persist, because it cannot "propagate", *i.e.*, perpetuate in its children, its own characteristic beliefs and preferences. All habit-formation under the example, instruction, command, influence, of others is propaganda. Indeed, so considered, all education, especially on its moral side, *quâ* habituation, is propaganda. And the concept of habit covers, not only habits of outward conduct, but equally habits of feeling and willing—attitudes of habitual loyalty to, and practice of, preferences and avoidances. If attitudes are communicated by "persuasion", it is certainly not persuasion in Lord Russell's sense. From religious orthodoxy to patriotism, from Communistic ideals to Nazi attachment to the *Fuehrer*, attitudes are communicated by propaganda, though, once they have been communicated, the experience of acting them out may lead to our recognising them, in reflection, as rational or irrational and approving them or disapproving them as such. This need for making common among large numbers of men certain attitudes and habitual preferences and beliefs, and stabilising society on this foundation, is the reason why movements, like Fascism and Communism, though they begin with the seizure of power and maintain themselves at first by force, seek to perpetuate themselves by propaganda, of which the most important part is the re-moulding of the educational system so as to communicate conviction in the form of habitual emotional attitudes and preferences. Beginning as irrational, these systems strive to become by propaganda more rational, in the sense to which we have so far confined the discussion.

And why "propaganda", not "persuasion"? Let us recall here that X can persuade Y only if both have common premisses to start with. If they have not, common premisses have first to be established. Lord Russell's account of the method of reason,

as analysed at the beginning of this article, suggests that X gets his premisses by "observation" and argues from them by "induction". It follows that Y must be given the experience of the same observations, and then be led to argue from them to the same conclusions. But, here we are concerned not with facts to be observed, as in the Natural Sciences (to which Lord Russell's language most fittingly applies), but with "ends" or values. The premisses must, therefore, be experiences of value or evaluations, and the problem becomes how to establish common value-experiences, common evaluations. This, I submit, is the proper function of propaganda. The value-experiences of men are plastic and mouldable to a very high degree. Men can, and for participation in the common life of a group must, be taught and trained to enjoy, desire, appreciate many things which, left to themselves, they would not enjoy, etc., and might even actively dislike. One can learn to love what one began by hating, to like what at first one disliked, to appreciate what one originally despised. But, such transformations come, not by persuasion in any ordinary sense of the word, but by propaganda and habituation.

I return, finally, to the problem above postponed: Is there anything rational in a value-experience? Is there any sense in which one end can be said to be more rational than another, and the active preference for, and pursuit of, the former more rational than devotion to the latter? Or are ends not amenable to reason because, in fact, there is nothing rational about preferences and avoidances at all?

The problem is familiar to students of Plato and Aristotle. Plato raises it in the form: which life is the best—the life of the lover of money, the life of the lover of honour, or the life of the lover of wisdom? Aristotle, similarly, asks whether the life of "theoria" does not rank higher than the life of "practice". Plato decides the question on the ground that the person who has experience of all three kinds of life is alone in a position to judge. He is the expert; he has the whole evidence in his own experience; his preference is decisive; his judgement has rational authority. Aristotle argues not merely on this ground, but adds the point that on the plane of "theoria" reason functions more perfectly—as it were in a medium appropriate to its own nature—than on the plane of "practice".

In the context of our present discussion, an argument for the application of the concept of reason in the sphere of ends might be given the following form. Every enjoyment, every desire,

every preference, as has already been said, is an intimation of value. It contains within itself what, on reflection, becomes an explicit judgement of value: 'this is good' (where 'good' is intended to serve as a generalised term for any kind of value). Again, every judgement of the type 'this is good' is the potential starting-point of a generalisation, 'this kind of thing is good'. To put this differently, every enjoyment is an instance of a universal, and thus capable of generating a demand for repetition ('I want this sort of thing again') or for its continuation ('I want more of this, or more of this sort of thing'). Every action in fulfilment of a desire may develop into a habit, and ultimately a rule, of so acting. Yet, neither on the plane of 'this is good', nor on the plane of 'this kind of thing is good', have these judgements any claim to absolute truth. They are not beyond challenge and criticism. The intimation of value may not be verified and sustained in further experience; the claim that here is value may not be made good.

The context for such criticism is, in the life of the individual (considered for the moment in abstraction from his membership of a group), to be found in the interaction and competition of his value-experiences, in response to which an urge to self-organisation, to an ordering of life as a whole, comes manifestly into play. This urge may be more or less successful, resulting in a well-organised or in a disordered, chaotic, life. And in different individuals different value-experiences may be given the highest rank and dominate the system formed. But, the presence of the urge towards wholeness, as such, cannot be doubted, and must be set down as one formal characteristic of the operation of reason in human life.

But, of course, the individual, thus considered, is an abstraction. Just as, in dealing with "ends", we were not dealing with mere neutral facts-observed, but with facts-observed-and-evaluated, so here we are dealing, not with individuals as mere specimens of a zoological species, but as members of organised groups, reflecting in the organisation of their ends (values) more or less adequately the scheme of values on which, and for the realisation of which, the group is organised. By education, in its propaganda character, the ends of the individual are moulded, in varying ways and with varying degrees of success, to the social value-pattern. Once more, we have here a principle of order derived from the larger whole of which the individual is a member. As a result, the individual's value-experiences and value-judgements bear to a large extent the stamp of conformity to the community of

interest and outlook which Lord Russell, too, recognises as a mark of reason in human life.

This is not, of course, the end-terminus of the argument. But, if we try to push beyond it, we find ourselves in a region of debate where little, if any, agreement is found. That the value-patterns of organised groups are not final, in the sense of being beyond criticism and challenge, is obvious. The history of all groups of whatever kind bears witness to this lack of finality—most strikingly the history of those groups, like the family, the church, the state, which play the most decisive parts in moulding the ends of their individual members. For myself, I would fain hold—and hope to have Lord Russell's support in so holding—that the highest values are, not only supra-individual, but supra-national; indeed, above any values which divide men into mutually exclusive groups. Truth, beauty, goodness are hackneyed terms, but they may, none the less, play here once more their traditional rôle of pointing to the possibility of values which unite men in common achievement and enjoyment, instead of dividing them and setting them against each other; values which demand to be shared, rather than possessed with competitive exclusiveness; values which are truly universal, and therefore truly rational.¹

¹ The argument has been stated, above, in the language of "value". But, remembering that, according to the view here taken, all desires, needs, interests, are "intimations of value", it is obviously possible, and may be worth while for some readers, to re-state the argument in the language of "interest", etc. It will then run:

An individual's life is rational, in so far as it is an ordered whole of interests, *i.e.*, in so far as the interests which it seeks to realise are so organised that the realisation of some (which count as lesser in the system) is limited by, and subservient to, the realisation of other interests (which count as higher). This "formal" character of order is itself a "material", or substantive, value or object of interest, because an ordered life is better than a chaotic one, whatever be the dominant interest. Order is thus an operative "universal" in such a life. And, further, inasmuch as order must, in the concrete, be realised through the organisation of life in the service of one or more "material" interests which are dominant, these, too, are "universal", considered as active ordering principles in relation to the details of life.

Next, the individual is a member of a social group. The order of his interests must, therefore, if he is to be a member with inner conviction and devotion, be related to the order of the interests of the social group. *Its* interests must be among *his* interests; and at times all his other interests must be subordinated to his interest in the interests of his group. Thus, membership of the group, which is another type of whole, brings into his life another ordering principle, the dominance of which will vary with circumstances, but which, as ordering, will act as a "universal" in relation to the other interests which it orders.

Lastly, social order and the individual's interest in it (or identification

Humanity is, alas, far from realising this ideal. It is far from ordering its affairs in such a way that these supremely rational values are effectively dominant in human societies, and so moulded into the pattern of individual lives that they are pursued in joyful and creative activity. Undoubtedly, faith in these highest values demands a robust optimism which believes in possibilities beyond anything it can see of actual achievement.

This line of thought, all-too-briefly sketched as it is, raises many difficult questions which cannot here be dealt with. But on one point I must touch, to prevent misunderstanding. My language above, concerning values which are "universal" and "supra-national", must not be understood as meaning that I wish to deny, or underrate the importance of, the national character of a culture, as determined by the history and circumstances of the people which is the bearer of that culture. It is not my purpose to deny to anything which exists any character which it actually has, but to point out that it actually has a further character which, in contemporary discussion, inspired by partisan zeal for one-sided emphasis on differences, is all-too-often ignored and overlooked. I use "supra-national" in the sense in which Western culture is supra-national, as the common possession, not only of the peoples, or nations, of Europe, but also of the peoples of America, both North and South, and in a more fragmentary way of the peoples of the East. It is, like all culture, assimilable and communicable across barriers of "race" and "blood". I call it "supra-national", not in order to deny that it exists in the form of national cultures with their own distinctive individuality, but in order to emphasise the complementary truth that these distinctive national cultures are nuances of a single culture-type, common to them all. And there is, surely, some reason to think that, in the modern world, with its ever-increasing facilities for culture-contacts, a world-culture is in process of formation, within which existing cultures, themselves

with it), are but the conditions for the realisation of interests which, in the absence of such order, can hardly flourish at all, but which, when they are enabled to flourish, transcend the plane of social-order interests, as such. Is there any judgement more authoritative than that which values most highly in the history of a people and a state the contributions made to human culture by its artists and scientists, its thinkers and scholars? The arts and sciences, and all those activities and achievements which we rank as the highest manifestation of the human spirit, here act as "universals" in relation both to the interest-system of the group, as such, and that of the individual, as such. And, so understood, they may fairly be ranked as the highest interests of "reason".

further modified and enriched by mutual contacts, will persist as nuances of this single and truly universal type. Science, all over the world, is already more supra-national than national. The great historic religions have always been, in principle, above differences of nation and race, though at the present day they are being challenged by religions of a retrogressive type, like nationalism and racialism. Even art, though more specifically conditioned than science by the national character of its cultural setting, makes none the less, in principle, a universal appeal: the art of one people or culture, given that the barriers of language-difference and lack of special knowledge have been overcome, can be appreciated by men belonging to another people and brought up in another culture. Indeed, it is in the realm of art that culture-contact is most obvious and most fertilising. These values are universal—in principle (potentially) always, in practice to a varying degree.

One last word, to conclude the argument: Experience teaches us that, in the effort to realise a hierarchy of values, there is a relation between certain higher values and certain lower values, such that the lower values must receive at least a minimum measure of realisation as a condition of the realisation of the higher. The body must be kept alive, if the mind is to live in, and express itself through, the body. A state must at least preserve its existence, as a condition of becoming a *Kulturstaat*. Hence, alike in the individual and in the group, the realisation of a hierarchy of values may be hampered and defeated, in varying degrees, partly by the sheer compulsion of circumstance which may exact exclusive concentration of effort on the lower values; partly by men's blindness to the higher values; partly by their perversity or wrong preference within the value-system. In all these ways, individuals and societies may fail to achieve reason as fully as it is ideally conceivable that they could and should. We may well grant Lord Russell's contention that there has been in the modern world a decline from "reason" to "unreason". But, if we would understand the nature and causes of this decline, as well as the best way of counter-acting it, we need a theory of reason as expressed in a hierarchy of ends; and we need also a theory of how such a hierarchy of ends can be made effective in the lives of men, as members of society, in the form of a community of interest and outlook. We cannot satisfy the former requirement, if we start from the premiss that questions of ends are not amenable to reason, nor the latter, if we rely merely on persuasion in the sense of argument. But whatever our choice

of ends and ideals, and of methods of propagating these ends and ideals, the fundamental fact remains that for us, who are participants in Western culture, these choices are made in a context of conflicting systems of values, competing with each other for realisation in our lives—values which Western culture has partly inherited from the many movements which have gone to its making, and partly begotten within its bosom by the interaction of these same influences. All are, as it were, experiments of reason in its historic efforts at self-embodiment. What their final fruit may be, none of us can foresee.

II.—MUST EMPIRICISM BE LIMITED ?

BY F. C. S. SCHILLER.

If a dispassionate intelligence could be found, and induced to contemplate the ways of philosophers with the icy eye of pure reason, it would encounter no more intriguing problem than that of explaining the universal and well-nigh invincible reluctance of philosophers to trust experience and to accept it, without prejudice and *arrière pensée*, at its face-value. For nothing is more difficult to find among the endless varieties of philosophic opinion than a whole-hearted and thorough-going empiricism. Some pragmatists may be able to make good their claim to this status, but for the most part even the most empirically minded, after the fairest promises and the profusest professions, are constantly to be caught backsliding, and are often found to end up in the shabbiest or most fantastic apriorism, or in a wanton and impotent scepticism. Somehow it seems to afford philosophers so much secret satisfaction to arrive at the merely negative conclusion that not all knowledge comes from experience, that they care little whether its origin is more plausibly to be derived from the Deity or the Devil.

I.

These reflections occurred to me very forcibly as I read the brilliant paper on the Limits of Empiricism which Lord Russell read to the Aristotelian Society last April. I was the more impressed because Lord Russell is among the most courageous and clear-headed of philosophers, who has long been known for his sympathy with empiricism and almost every other philosophic heresy, who has striven most unceasingly to achieve the ideals of pure disinterested intellect and perfect exactitude, and has most relentlessly dissected out the weaknesses of man's passion-prompted soul. Moreover, he has nobly preferred being understood to being marvelled at, and has usually scorned to enfold himself in the mists of technical verbiage.

Accordingly it is no trivial thing when a man of such eminence sets himself to determine the limits of possible experience, and it is well worth while to trace the process by which he has persuaded himself that pure empiricism is untenable.

Let me begin by quoting his conclusion (pp. 148-149) : " We all in fact are unshakeably convinced that we know things which pure empiricism would deny that we can know. We must accordingly seek a theory of knowledge other than pure empiricism. . . . We have found reason to believe :—

" (1) That if any verbal knowledge can be known to be in any sense derived from sense experience, we must be able, sometimes, to ' see ' a relation, analogous to causation, between two parts of one specious present.

" (2) That facts about universals can sometimes be perceived when the universals are exemplified in sensible occurrences ; for example, that ' preceding ' is transitive, and that blue is more like green than yellow.

" (3) That we can understand a form of words, and know that it expresses either a truth or a falsehood, even when we know of no method of deciding the alternative.

" (4) That physics requires the possibility of inferring, at least with probability, occurrences which have not been observed, and, more particularly, future occurrences.

" Without these principles, what is ordinarily regarded as empirical knowledge becomes impossible.

" It is not necessary to maintain that we can arrive at knowledge in advance of experience, but rather that experience gives more information than pure empiricism supposes."

II.

Lord Russell leads up to these conclusions by accepting from an anonymous contributor to the *Encyclopædia Britannica* the definition that " empiricism is the theory that all knowledge is derived from sense experience ", and proceeds that " three questions arise before we can discuss whether empiricism is true or false " (p. 131).

It should here at once be noted that this definition restricts experience to *sense* experience, and that Lord Russell does not define what he means by ' pure ' empiricism, but leaves it vague. Nor does he explain in what sense he uses ' true ' and ' false '. Apparently in the sense assumed by the ' law ' of Excluded Middle, *i.e.*, as excluding the possibility of the meaningless. He assumes, moreover, that the meaning, truth, and falsity of a

"form of words" can be ascertained without knowledge of their context and use (p. 133). I think also, but cannot be sure, that he assumes 'true' and 'false' to be 'absolute' for the purposes of his argument. At any rate he takes them to be unambiguous; for his subsequent argument would go to pieces if he admitted that 'true' and 'false' were relative to a context and a purpose.

Lord Russell then declares: "we must ask what is meant by 'knowledge', what by 'derived from', and what by 'sense experience'". Of 'knowledge' he says "there is no accepted definition". He might have added that what is to be meant by 'knowledge' is precisely the cardinal dispute of the various schools of epistemology.

'Derived from' Lord Russell thinks "may be interpreted either logically or causally." I should like to add, "whatever logically and causally may mean". And the possibility of psychological and biological interpretations should not be overlooked.

"The words sense experience", we are further told, "are capable of either a wide or a narrow interpretation." But whichever is chosen, an important question is begged. For experience is *restricted* to sense experience, and sense experience is assumed to be a process to be adequately observed by an *external* observer. What difference the experiencer makes to the experience is thereby ruled out of court—by the way the question is put. Thus every voluntarist or personalist interpretation of experience is excluded *ab initio*. Whether this exclusion is in Lord Russell's case intentional, is not clear, but its consequences will be found to be far-reaching at every stage of the subsequent inquiry.

III.

In the first place it justifies Lord Russell in starting from the familiar question of academic debate "what are sense-data, and what is the knowledge most immediately dependent upon them? This leads at once to the question: how is this knowledge dependent upon these data? When these questions have been decided, we can go on to inquire whether there is any other knowledge, and, if so, what reason there is for believing it."

Now if the standpoint of the external observer had not been begged (as shown above), the answer to these questions would be easy. Sense-data are fictions of a highly sophisticated philosophic 'analysis', for which there is no psychological warrant and for which the practical man has no need. No one therefore has any cogent "reason to believe" in them. It may be that

for certain technical purposes of certain sects of philosophy they are convenient for the purpose of avoiding other simpler explanations ; but they are to be reached only by devious and dubious ways. At any rate, one may make bold to say that neither the common man nor the practical man nor the scientist has any need to 'analyse' his experience in terms of sense-data. What they all require, and assume, is *perception of things*, and of states of themselves, in the light not only of their own past, but also that of their ancestors ; they all, moreover, believe themselves to be amply justified in their beliefs, which indeed are part of the great pragmatic interpretation of experience, in which we are all educated, and by which we all live.

The first things therefore an accurate account of knowing should "eliminate as irrelevant" (p. 132) are the philosophic notion of sense-data, and the attendant abstraction from the antecedents, context and setting of the "sensible occurrence". It amazes me that Lord Russell should not have realized this, for his whole account (pp. 132-133) of the way in which our "sensible facts" "depend upon our interests and past history" is excellent, and vastly superior to the traditional epistemologies. I should merely like to add to the remark that knowing is noticing (p. 133) that noticing is always *selecting*, and that selections are always optional and *risky*. Thus the volitional side of knowing will not down.

IV.

At this point Lord Russell discovers a "logical difficulty". Our most immediate knowledge depends, not only on the 'sensible fact' but also on our own past history. But how can we know "at the very beginning of empirical knowledge" "about the effect of the past upon ourselves" ?

This would appear to be in essence the old Greek puzzle about the origin of knowledge out of previous knowledge, which led Plato to postulate the pre-existence of the soul. A less romantic philosopher, however, might be tempted to ask : Why should not our past affect our knowing without our knowing it ? Why should we not gradually discover, *from experience*, how much our past has, for good or evil, moulded our knowing ? And why should we gratuitously commit ourselves to an unexperienceable fiction of a "very beginning of empirical knowledge" ? The very notion seems to arise from a confusion between psychological and logical analysis.

V.

Lord Russell, however, prefers to infer that there must exist a "primitive non-verbal sense-knowledge" as a logically necessary basis for other empirical knowledge. He admits, however, (p. 134) that it is as yet logically useless, and must be made verbally communicable. He points out that "there are causal relations between words and what they mean: a cat causes the word 'cat', and the word 'cat' causes expectation of a cat, or perhaps the actual sight of one. Moreover, these causal relations can sometimes be perceived, and he defies any empiricist to deny that "I say 'there is a cat' because a cat (or a sensible appearance resembling that of a cat) is there" (p. 136). This 'because' "seems to take me beyond what an empiricist ought to know. The word 'because' must be taken as expressing a relation which is, at least partly, that of cause and effect" (*ibid.*).

I have been particularly interested by this doctrine. For I have been puzzled for many years to understand how Lord Russell managed to combine acceptance of Hume's criticism of causation as necessary connexion, with his continued references to some sort of causal relation. The present paper plainly proves that he *does* hold both the doctrine that the necessary connexion between events is not a fact of observation, and that nevertheless "the word 'because' . . . must be understood as expressing a more or less causal relation and that this relation must be *perceived*, not merely inferred from frequent concomitance. 'Cause' accordingly must mean something other than 'invariable antecedent', and the relation of causation, or some relation intimately connected with it, must be one which can sometimes be perceived" —(why not always ?) (p. 137). Nay more: "problems connected with language are absent in some instances in which the same relation can be perceived, *e.g.*, if I am hurt and cry out. We seem, here, to perceive indubitably a connexion between the pain and the cry" (*ibid.*). Lord Russell will not indeed say "without qualification, that we must be able to perceive 'causal' relations" but only that sometimes he "can perceive *some* relation having an intimate connexion with that of cause and effect" (p. 137 *s.f.*).

I confess, however, that *perceived* causal relations of any sort seem to me a plain repudiation of Hume's cardinal doctrine, and that I can make nothing of "a *more or less* causal relation" (p. 137, *cf.* pp. 146, 147). If it existed, it should, I suppose, admit of quantitative treatment, and would provide a great opening for a new calculus to determine whether a 'relation' was 50 per cent. 'causal' or only 25 per cent. As for relations which

are "analogous to causation" (pp. 149, 148) one would like to see the analogy drawn out.

At the same time Lord Russell's attitude is thoroughly characteristic of the ordinary empiricist's treatment of Hume. He professes the greatest enthusiasm for the reduction of the necessary connexion of causes to regular sequences, and then goes on talking about the causal laws of the special sciences exactly like his unregenerate metaphysical brethren. Nor does he stint himself in the use of the causal implications of ordinary speech. Hence his 'empiricism' here reaches one of its limits, simply because he *refuses* to follow Hume, and ceases to be an empiricist at all in the sense he originally claimed.

The reason for this *débâcle* probably is that the metaphysicians, the Humians, and the scientific 'empiricists' all get into the *same* difficulty at this point. They have all begun by making the same unjustified abstraction. They have all assumed (uncritically) that the crude, immediate, personal experience of voluntary action cannot possibly have anything to do with the scientific conception of causality. But the anthropomorphic assumption of the conformity of nature with human nature is much more deeply rooted both in language and in scientific method than they had realized.¹

VI.

Lord Russell's next difficulty is that of "justifying inferences from facts to facts" (p. 138). He quotes Wittgenstein's account of atomic facts independent of one another: "from the existence or non-existence of an atomic fact we cannot infer the existence or non-existence of another. The events of the future cannot be inferred from those of the present. Superstition is the belief in the causal nexus."

Lord Russell admits that this (authentically Humian) doctrine paralyses 'valid inference', reduces (deductive) reasoning to tautology, and "sweeps away all inferences that have any practical utility." But he refrains from inferring that there must be some deep-seated error in the premisses that lead to such conclusions, and contents himself with demanding immediate *perception*

¹ Hume alone saw the relevance of this experience to the 'causal' problem, and argued against its admission, in the *Enquiry*, with his usual ingenuity. (See *Humanism*, ch. xvi.) The question is ultimately whether philosophy and science are restricted to the standpoint of the external observer, or may also take into consideration that of the experienter and the agent.

of relations of transitivity and asymmetry (p. 140). He does not envisage the possibilities that a thoroughly empiricist logic would support Hume by dropping the traditional notion of formally valid inference, by regarding the truth of all inferences as hypothetical and experimental, and by accepting verification by experience as the only possible and actual, though never formal, validation.¹

VII.

At first sight Lord Russell is on safer ground when he argues (p. 140) that "it is possible to perceive facts about universals also in many other ways. In looking at rainbows, we can perceive that blue and green are more similar than blue and yellow. . . . These things are known empirically in one sense, but not in another. Take the case of blue, green, and yellow. It is only through sense that we know green to be between blue and yellow: when we see all these colours simultaneously, we can also see their resemblances and differences, and we can see that these are properties of the shades, not of the particulars." Hence "attention to the facts of sense can give rise to general knowledge".

But surely a thorough empiricist would here be entitled to point out that Lord Russell has greatly simplified the complicated facts of colour-vision. The terms 'blue', 'green', and 'yellow' are only rough, though practically convenient, references to an indefinite mass of colour-hues, shades and chromas, which pass imperceptibly into each other, and vary enormously according to the illumination in which they are viewed, and the backgrounds and areas on which they appear. Also empirically endless anomalies are to be found in the colour-vision of individuals. Also colour-vision has in all probability evolved somewhat recently, and may be developing further. Under these circumstances would it not require altogether unreasonable confidence in *a priori* (i.e., verbal) argument to expect nature to confirm all our expectations about abstract 'blue', 'green', and 'yellow'? I can well imagine, therefore, that a deep shade of (indigo)

¹ There is of course a formally invalid begging of the question in the reasoning on p. 138 that "within one specious present we perceive that A precedes B, and within another specious present we perceive that B precedes C." This is 'self-evident' only as an abstract formula. In any actual use the identity of the two B's involves a hypothesis and a risk. Lord Russell here encounters Alfred Sidgwick's objection to the 'validity' of the syllogistic form, owing to the liability to ambiguity of any middle term.

'blue' in a yellow light will look much *less* like a yellowish 'green' than a pale shade of 'blue' looks like a pale shade of 'yellow' in a rosy light. In short, the freaks of colour-vision render it a subject eminently unsuited for a *a priori* argument.

VIII.

Lord Russell next considers the sort of empiricism which has sprung up in modern mathematics to cope with the paradoxes of the 'infinite', and is known as 'finitism', and refers to Miss Ambrose's two recent articles in *MIND* (vol. xlv.). Here it might be prudent, and would be sufficient, for a layman in mathematics to content himself with remarking that there are at present extant no less than three incompatible interpretations of the philosophic basis of the mathematical sciences, of which Lord Russell's is one, and that the present Paper seems to exhibit him as retreating before 'finitism'.

His arguments against finitism, moreover, seem to rest on the indeterminateness of typically old-fashioned senses of 'true' and 'false', and on the ambiguity of 'certain' (logical or psychological?). Lord Russell adduces 'it rained in London on January 1, 1066'. This is, so far, only the formal truth-claim of a contextless 'proposition' about an historical event; it has no meaning nor value (truth or falsity) as it stands. It could become a true judgment only if some one interested in the matter found records that would satisfy expert historians that it *did* rain then and there. But if in a proper context its truth were alleged and accepted, the truth of this judgment would *differ in kind* from the 'truth' of the 'proposition'. It would no longer be a mere unsupported truth-claim, but would possess, like all historical 'truths', a higher or lower degree of probability depending on the value of the evidence supporting it. It could never lay claim to absolute or unconditional truth.

There follow a number of abstract propositions about 'integers greater than any yet mentioned', to which it seems hard to imagine any actual context (p. 142). Lord Russell does not yet seem to have realized that for a 'proposition' to acquire any actual meaning it must be given relevance to some actual problem, and that until this has been done, it has neither truth nor falsity, simply because the question of meaning takes precedence over that of cognitive value (positive or negative). If the 'finitist' he is arguing against were also enough of a humanist to conceive the number-system as a tool for human purposes of calculation, he could easily dispose of all Lord Russell's puzzles by pointing

out that numbers were always formed for a purpose, and that the 'infinity' of number merely meant that it was possible to form numbers large enough for *any* purpose, once the 'law' of the formation of numbers had been formulated.

In disputing Miss Ambrose's remark that it is *logically* impossible to run through the whole expansion of π , Lord Russell retorts that it is *medically* impossible (p. 143). But why should it not be *both*, and *psychologically* impossible to boot? The alternatives are not exclusive. Anyhow Lord Russell's postulation of an omniscient Deity to reveal the whole truth to a mathematical Moses reads somewhat queerly when one remembers Lord Russell's former contributions to theology. Presumably he meant that his 'mathematical Moses', who believed the whole expansion of π had been revealed to him by God, would surely be confined in a lunatic asylum! But I do not see why the finitist should not *agree* that obstinate persistence in a claim to have had a revelation about the 'exact' value of π would in all probability land its asserter in an asylum.

Lord Russell finally admits (pp. 144-145) that "outside mathematics, we do not know with any certainty whether classes are finite or infinite, except in a few cases. And even when we think we know, it is no great help." For "on finitist principles, the form of words 'all men are mortal', is outside the scope of the Law of Excluded Middle. For my part, I hold that, as soon as I know what is meant by 'men' and what by 'mortal', I know what is meant by 'all men are mortal', and I know quite certainly that either this statement is true, or some man is immortal" (p. 145). I devoutly hope that this date, when Lord Russell shall have discovered (presumably by revelation rather than experience!) all the meanings, past, present, and to come of 'men' and 'mortal' will speedily arrive, and that he will then promptly divulge them; but until he does, I see no reason for receding from the contention in my article in *MIND* for April, 1935, that a thorough empiricist can involve both the meaning of 'man' and that of 'mortal', and the 'proof' of man's universal mortality, in no slight perplexity.

Finitism is finally rejected, because it rests on "an untenable general principle that what cannot be proved or disproved is neither true nor false". To which the reply is that what cannot be proved or disproved is scientifically meaningless, and that it is misleading to discuss the very ambiguous terms 'true' and 'false' without distinguishing between the potential 'truth' of a formal truth-claim and the tested truth of an actual allegation. Also it would seem that finitists would not admit that they

cannot give empirically sufficient and empirically verifiable accounts of mathematical 'induction', and of the genesis of the natural members.

IX.

Upon the important question whether modern science is not becoming wholly empirical, Lord Russell bestows comparatively little space. He merely quotes a passage from Prof. Dirac's *Quantum Mechanics*, and declares it to be incompatible with thorough-going empiricism. "A great deal is assumed that cannot be observed, and cannot be inferred from what is observed, unless forms of inference are admitted which pure empiricism must reject" (p. 146). Presumably Lord Russell means that hypotheses and their verifications never lead to valid 'proof', which can never be improved upon; but is not this empirical fact the very reason for the progressiveness of science?

Lord Russell then points out a number of scientific assumptions which he regards as incompatible with pure empiricism. First, the reliance on memory. This is an excellent example—for the empiricists. For we are pragmatically compelled to go on trusting our memory, even though we are constantly finding out, by experience, how little it deserves our trust. But why should not the empiricist be content to recognize the facts, to take all possible precautions, and to hope for the best? What more could all the metaphysics in the histories of philosophy enable him to do? It is no help to him to construe the trustworthiness of memory as a trans-empirical principle.

Secondly, the same is true of the trustworthiness of testimony: a liar's evidence does not become more truthful because it is given on oath. Thirdly, similarly, prediction of the future is in constant use, and is empirically found to be possible and valuable, even though it is not absolutely certain, and it does not require us to feel it so.

The thorough empiricist in short has recognized that scientific principles are probably all methodological, and that the progress of science does not require them to be more. Also that they are all elastic and adaptable, and can be changed to fit our growing knowledge.

X.

There is no reason, then, to think that Lord Russell has shown a radical and thorough empiricism to be untenable. Or, at most, we may say, he has shown this only if 'experience' is limited,

by definition, to *sense-experience*. But this limitation seems arbitrary. It really raises the question whether all experience is to be squeezed into what some philosophers call 'sense-experience'. The practical man and the thorough empiricist will both be hard to persuade of this ; and I can see many and good reasons for agreeing with them. For when we set out to consult experience, we have no business to impose *a priori* limitations on what shall count as such. It is the experience of the whole man, as it comes to him, that counts, and not a doctored selection that some philosophic analysis has distilled from 'the senses' and fabricated from 'sense-data'. The distinction between unprejudiced psychological observation of the actual processes and their *ex post facto* interpretation in terms of philosophic theory, should be carefully maintained. If this were done, there would be little left to support the sensationalistic and intellectualistic assumptions which form the *a priori* of so much traditional naturalism.

XI.

But we have yet to face the two fundamental objections to any complete empiricism which render it so repugnant to philosophic minds. The first of these raises the ostensibly logical question of what is to be accepted as the *empirical validation* of a hypothesis. Is it enough that we should wait and see till it actually comes true ? Or must we always demand in addition reasons to expect it, and demonstrations that will prove it absolutely true ? I take it that a true empiricist would be content to wait and see, whereas the apriorist and the weak-kneed empiricist crave for some further assurance of some sort. The former's position will then be that he claims the right to formulate any hypothesis that his past experience suggests to him, and is willing to let the course of events determine his estimate of its value. If the predictions drawn from the 'hypothesis' persistently come true, his confidence in its 'truth' will grow until it reaches complete psychological certainty ; if not, he will modify his hypothesis (unless it is a vitally important postulate) or substitute others, until the consequences observed are in good agreement with those expected. He will also realize that he need not conceive his hypotheses as ultimate facts, but is entitled to assume any principle provisionally, experimentally, or methodologically ; and that most, if not all, the scientific principles in actual use may be taken as methodological. That is, they are

primarily assumptions for reaching results not otherwise attainable, or not so easily attainable. Often this methodological function is their primary or only significance. For example, the assumption of a predictable, or more or less determinate, sequence of events is needed, if we desire to foresee the future and to prepare for it ; but it is unnecessary and superfluous to take 'determinism' as more than this, say as a universal 'law' of nature. Moreover, the use of the determinist principle does not necessitate belief in its truth : its use for the sake of prediction is unavoidable, even though we need not believe that it exactly applies to the case in hand. It is enough that we should be willing to try it for what it is worth, and thereby get better results than if we had not attempted any prediction at all.

The true empiricist, then, is one who is willing to test his beliefs by their consequences, and to abide by their results. That is, he is willing to accept consequences as having logical value, and to permit them to validate beliefs.

XII.

Undoubtedly, however, to many minds the suggestion of *such* empiricism would be unpalatable and indigestible. To convince them that they stand to gain nothing by their recalcitrance, we may begin by raising anew Hume's uncannily penetrating question : why *should* the future resemble the past ? Like all Hume's posers this is a psychological as well as a logical question, and has practical as well as 'theoretic' bearings. But thorough empiricism would admit it to be a good question. It squarely raises the issue whether it is possible to extract from the past any absolute guarantees for the course of the future, and the growth of knowledge is rendering it more and more difficult to answer it in accordance with anti-empiricist prejudices.

As a matter of fact, science has revealed a number of features about our world which should make it decidedly uncomfortable for *a priori* philosophers. (1) Despite the reign of natural 'law', the world somehow manages to generate unpredictable novelties, the 'accidental variations' of Darwinism. (2) There is no proof that the 'laws' of nature are immutable. They may shrewdly be suspected of being only the inveterate *habits* of things, and the laws in actual use are hardly even that : they are merely convenient formulas for predicting the course of events which are constantly being altered and improved upon. (3) As the real is not static but changes ('evolves') and nobody can say where the limits of the possible are laid down, no argument resting on

the present order of things can be absolutely cogent. The truth of its conclusion is relative to that of its premisses, and at best the latter are true only so far as we can tell up to the present. Hence (4) a 'logical impossibility' exists only *rebus sic stantibus*, for minds like ours, arguing from the 'knowledge' we have, making our traditional postulates, and using terms in their current senses. If any of these conditions are departed from, the former logical impossibility may well decline into a psychological 'impossibility' which was only an illusion. Hence innate ideas, and arguments based on the finality of *a priori* principles *à la* Kant, are helpless in face of suggestions that the human mind may continue to evolve and may thereby invalidate reasonings based only on our present 'necessities of thought'. (5) Quite apart from such anticipations there would seem to be lurking, even in the stabilized order of experience, plenty of opportunities for catastrophes which have never yet come to pass, but are nevertheless not beyond the bounds of possible experience. Can we argue, for example, that the earth will never be destroyed by the sun's collision with another star, because it never has been yet ? This reasoning remarkably resembles the principle of scientific 'induction' as it is often formulated ; yet would it not be the height of fatuity to hope to ward off such a cosmic catastrophe by dialectical reasoning based on the meanings words have acquired from experience up to date ?

We seem to have, then, no means of guaranteeing that the future we desire will be made secure by any scientific reasoning. All our 'knowledge' is but conditional and more or less probable, and its 'principles' rest upon hopes and postulates. The factor of doubt, contingency, and probability is not to be eradicated from the course of experience by any amount either of dogmatism or of past experience. But is this any reason why we should cower under this uncertainty, and delude ourselves that, because we shrink from it, it does not exist ? Is not the proper attitude, alike of the true man and of the true empiricist, to make every preparation he can, undauntedly to meet the dangers and uncertainties of the future, and to keep on readjusting his actions while the items of experience gradually accrue ? A truly radical empiricism, therefore, will face even an incalculable future without seeking to limit and ward off its risks by the vain incantations of an *a priori* verbalism.

III.—WHAT DID BERKELEY MEAN BY *ESSE IS PERCIPi?*

BY J. L. STOCKS.

I.

BERKELEY intended presumably to indicate the sense in which he meant this cardinal principle to be taken when he prefixed to his *Principles* a polemic against abstract ideas. But by a curious inadvertence or inconsequence he makes no reference in the Introduction to this application of his denial of abstraction, and when he comes to state the principle *esse is percipi* he only once refers back to his polemic against abstract ideas.

This is the passage (*Principles*, 5):

“Can there be a nicer strain of abstraction than to distinguish the existence of sensible objects from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and figures—in a word the things we see and feel—what are they but so many sensations, notions, ideas, or impressions on the sense? and is it possible to separate, even in thought, any of these from perception? For my part, I might as easily divide a thing from itself. . . . My conceiving or imagining power does not extend beyond the possibility of real existence or perception. Hence, as it is impossible for me to see or feel anything without an actual sensation of that thing, so it is impossible for me to conceive in my thoughts any sensible thing or object distinct from the sensation or perception of it. In truth, the object and the sensation are the same thing, and cannot therefore be abstracted from each other.” (Last sentence omitted in ed. 2.)

It will be noted that here Berkeley ends by denying that this is a case of abstraction at all.

A further point is that the argument of the Introduction largely concerns the relation of genus to species, as exemplified in the abstract idea of triangle which is “neither equilateral, equicrural, nor scalenon, but all and none of these at once”; and this relation is not relevant to the case of perception. Thus the assertion of a direct and positive connection between the denial of

abstract ideas and the assertion of *esse* is *percipi* remains somewhat conjectural. The *Commonplace Book* does not seem to endorse it in any way.¹ Yet on the face of it the connection seems likely, and it is commonly asserted. Thus, *e.g.*, Prof. Dawes Hicks says (*Berkeley*, p. 103)—“to regard an object of sense as having an existence other than and apart from that which it has as a perceived fact, to suppose that its existence is one thing and its being perceived another, appeared to him . . . just a typical instance of that tendency to erroneous abstraction to which human thinking is addicted.”

How far Berkeley in his *Introduction* is a nominalist, how far his real position on this question differs substantially from Locke's, and whether all this stands in any integral relation with the rest of his doctrine are questions I do not wish to discuss. I am concerned primarily with *esse* is *percipi*, and the first point about this that I want to make is that there is room for a legitimate query as to its connection with the opening polemic against abstract ideas. I am inclined to suggest that this polemic was rather a consequence of the doctrine *esse* is *percipi* than a consideration leading up to it. It may be that the principle did commend itself to Berkeley, as Prof. Dawes Hicks says it did, as the correction of a common and vicious abstraction. But, if so, it was an abstraction of a rather different order from those stigmatised in the *Introduction*.

II.

In this connection certain entries of the *Commonplace Book* seem to me to be of cardinal importance. I give them in the order in which they come in Johnston's edition, but I have incorporated the textual corrections furnished by Aaron and Luce.²

584. Consciousness, perception, existence of ideas, seem to be all one.

¹The evidence is too complicated to be discussed in a footnote. Prof. Luce's careful discussion in *Berkeley and Malebranche*, ch. vii, begins by asserting a closer connection between the two theses than I should be inclined to allow; but the evidence which he presents suggests to his mind, it seems, as to mine, (a) that the two theses were of independent origin (b) that the denial of abstraction was the later formulated.

²For Aaron's corrections, see *Mind*, Oct. 1931 and April 1932; for Luce's, see *Berkeley and Malebranche*, Appendix I.

×585.¹ Consult, ransack y^r understanding. W^t find you there besides several perceptions or thoughts? W^t mean you by the word mind? You must mean something that you perceive or y^t you do not perceive. A thing not perceived is a contradiction.

×586.¹ Mind is a congeries of perceptions. Take away perceptions and you take away the mind. Put the perceptions and and you put the mind.

×587.¹ Say you, the mind is not the perception, but that thing which perceives. I answer, you are abused by the words that and thing. These are vague empty sounds without a meaning.

588. The having ideas is not the same thing with perception. A man may have ideas when he only imagines. But then this imagination presupposeth perception.

591. *Qu.* if there be any real difference betwixt certain ideas of reflection and others of sensation, *e.g.* betwixt perception and white, black, sweet, etc.? Wherein, I pray you, does the perception of white differ from white.

593. The understanding seemeth not to differ from its perceptions or ideas. *Qu.* W^t must one think of the will and passions?

615. The distinguishing between an idea and perception of the idea has been one great cause of imagining material substances.

665. 'Twas the opinion that ideas could exist unperceiv'd, or before perception, that made men think perception was somewhat different from the idea perceived, *i.e.* y^t it was an idea of reflection; whereas the thing perceived was an idea of sensation. I say, 'twas this made 'em think the understanding took it in, received it from without; w^{ch} could never be did not they think it existed without.

855. The distinction between idea and ideatum I cannot otherwise conceive than by making one the effect or consequence of dream, reverie, imagination—the other of sense and the constant laws of nature.

Finally, an earlier entry sums all this up—

237.² All things by us conceivable are—1st, thoughts;

¹ These three entries have prefixed to them in the MS. the small cross which Prof. Luce interprets as an obelus: see Appendix I. in his *Berkeley and Malebranche*. I accept his view that the mark is an obelus; but in his own treatment of the obelized entries he more than once suggests that they contain something which Berkeley believed, but for one reason or another was reluctant to say. Thus the obelus does not necessarily indicate the rejection of the entry to which it is prefixed. Each obelized entry must be considered on its merits in connection with the rest.

² This entry is from the earlier of the two note-books of which the Commonplace Book is composed. All the others are from the later.

2ndly, powers to receive thoughts; 3rdly, powers to cause thoughts; neither of all w^{ch} can possibly exist in an inert, senseless thing.

These quotations from the *Commonplace Book* show that Berkeley's mind was much exercised about Locke's ideas of reflection. They strongly suggest that the denial of such ideas was an integral part of the principle *esse is percipi* as he understood it. They go some way to fill a gap in the *Principles* and the *three Dialogues*, which say nothing about ideas of reflection or why Berkeley rejected them.

The main points are these. The mind is not a thing that perceives: it consists of its perceptions (586-587). A query here is properly entered as to what will is (593) but this is not pursued. The mind then is its ideas or perceptions, and these perceptions are perceived things. A sensory perception is not a perception of an idea of sensation: it is that idea. There is no difference between 'perception of white' and 'white' (591). It is precisely the belief that ideas exist unperceived that makes the distinction between *perceptio* and *perceptum* possible, which distinction is then used as an argument for the belief. When the distinction is seen to be baseless the argument vanishes. The essential point thus is that there is no distinction between an idea and the perception of an idea (615) or, to put it otherwise, that *idea* generally is equivalent to *ideatum* (855). In the field of perception this equivalence can be asserted without qualification, but some reservations must be made for the cases of "dream, reverie, imagination" (*ib.*). In such cases it has to be admitted that an idea is not in an unqualified sense a thing. It is a dream thing or an imaginary thing.

It must be noted that Berkeley does not argue merely that *perceptio* can only be separated by a vicious abstraction from *perceptum*: he argues much more drastically that no legitimate distinction is possible (615 "The distinguishing betwixt. . ." 855 "The distinction between . . ."). It seems that in his view the former line is open to the charges of subjectivism, scepticism, or agnosticism, which his view escapes. If you believe that knowledge is of ideas, which are distinct from things, you will have to admit that correspondence between the ideal and the real order cannot be guaranteed, and thus you will destroy the basis of 'all real truth' (612). But if ideas are things the sceptical argument falls to the ground. So, in the *Third Dialogue*, Hylas says—"Can anything be plainer than that you are for changing all things into ideas? You, I say, who are not ashamed to charge me with scepticism. . . ." "You mistake me," Philonous-

Berkeley replies, "I am not for changing things into ideas, but rather ideas into things; since those immediate objects of perception, which according to you are only appearances of things, I take to be the real things themselves" (*Works*, i., 463). Kant, and some other phenomenologists, would probably have been accused by Berkeley of attempting to change things into ideas, a course as dangerous to knowledge as materialism. His aim is to change ideas into things, and for this the essential step is to abolish the distinction between perception and the thing perceived.

III.

If this interpretation is correct, if the rejection of Locke's ideas of reflection is an integral part of the doctrine *esse est percipi*, it is somewhat strange to find this very rejection called in question in the light of the opening sentences of the *Principles*. The opening paragraph of the work propounds as 'evident' a division of the "objects of human knowledge" into—(a) 'ideas actually imprinted on the senses', (b) 'such as are perceived by attending to the passions and operations of the mind', (c) 'ideas formed by help of memory and imagination'. At the end of the paragraph examples of the second class are given in the latter part of the final sentence—"other collections of ideas constitute a stone, a tree, a book, and the like sensible things; which as they are pleasing or disagreeable excite the passions of love, hatred, joy, grief, etc." Beside this we may set the passage in the *Commonplace Book* where Berkeley writes down a kind of draft of the opening arguments of the *Principles*.¹ "1. All significant words stand for ideas.² 2. All knowledge about our ideas. 3. All ideas come from without or from within. 4. If from without it must be by the senses, and they are called sensations. 5. If from within they are the operations of the mind, and are called thoughts" (C.B., 903 ff.).

The passage in the *Principles* has not attracted a great deal of attention but seems to have been commonly taken as indicating

¹ *Commonplace Book*, 903 ff. These entries should probably be printed, as Prof. Luce has urged, not where Johnston prints them, but after 395, i.e., at the end of the earlier note-book. But even so they are fairly late, since the two note-books were, it seems, for some little time in simultaneous use. Entries 1, 3, and 5 of those cited in what follows have Berkeley's obelus.

² The proposition that all significant words stand for ideas is advanced by the *Minute Philosopher* Alciphron (*Works*, vol. ii., p. 319) and disowned by Euphranor on Berkeleian grounds (inertness of ideas, activity of spirit, etc.): see esp. pp. 327, 328.

a general adhesion to the Lockian scheme with its distinction between external and internal sense. This has, however, been challenged by G. A. Johnston. He points out that in the opening sentences of the *Principles* the word *idea* is not actually applied to the second kind of object, while it is applied to the first and third; and that 'such as' may stand for 'such objects as' and need not stand for 'such ideas as'. I do not think that Mr. Johnston's interpretation can be said to be impossible, but it is surely very strained and unlikely. And in view of the passage I have quoted from the *Commonplace Book*, which makes all significant words stand for ideas, coupled with the fact that the *Commonplace Book* shows Berkeley to have hesitated up to the last moment whether to use *idea* in the wider sense or confine it to the perceptible, I think we must suppose that Mr. Johnston is wrong and that these opening sentences remained as they were originally written by an oversight. It is, however, strange that they were not altered in the second edition, for they are in flagrant contradiction, if taken in their natural sense, with some sentences added then, e.g., with the end of par. 27 where we are said to 'have (not an idea but) some *notion* of soul, spirit, and the operations of the mind'. But even at this date the question of terminology is treated as unimportant. "If", he writes (142 fin.²), "in the modern way, the word *idea* is extended to spirits, and relations, and acts, this is, after all, an affair of verbal concern." Thus we have Berkeley's word for it that he does not care much whether these passions and operations of the mind are called ideas or not.

Prof. Dawes Hicks (p. 109) rejects Mr. Johnston's interpretation of the offending sentences and evidently thinks, as I do, that Berkeley left them in the text by an oversight. "At the beginning of the *Principles*", he writes, "he starts by accepting, somewhat precipitately, Locke's threefold division, according to which there are simple ideas of sense, simple ideas of reflection, and complex ideas." He goes on to point out, truly enough, that Berkeley stresses, as Locke did not, the distinction between ideas of imagination, which are products of mental activity, and ideas of sense, over which the mind has little or no control. But he does not seem to attach much importance to the question of ideas of reflection, and he appears not to have observed that the opening statement of the three classes of object is not a mere repetition of Locke, but a revised version, varied evidently with precise reference to this distinction between activity and passivity of mind to which Berkeley attached so much importance.

The sentence in which Prof. Hicks summarises Berkeley's

opening contains some slight inaccuracies. He has seriously altered the emphasis by introducing the qualification *simple* into the description of the first and second of Berkeley's classes. Its absence in Berkeley's text shows at least that Berkeley had not this character prominently in mind, and further, whatever meaning 'idea of reflection' had for Berkeley, 'simple idea of reflection' surely had none. For mind, soul, spirit is no complex idea. Careful attention to Berkeley's words shows, as I have said, that what he had in mind was not the antithesis simple) (complex—but the antithesis, largely coincident with that—hence the confusion—passive) (active. The first class is described as "ideas actually imprinted on the senses", and the examples given are light, colours, heat, motion, etc. The word 'imprinted' is used as implying mental passivity. The third class, as described, actually includes non-complex ideas revived by imagination. "Ideas", says Berkeley, "formed by help of memory and imagination, either compounding, dividing, or barely representing those originally perceived in the aforesaid ways". The examples given are of complexes such as *apple*; but quite obviously the criterion is activity, as the telltale addition 'barely representing' conclusively shows. These ideas are not 'imprinted', but 'formed', *i.e.*, they require activity of mind. The second class is described in terms verbally almost the same as Locke's. Locke describes reflection as "the perception of the operations of our own mind within us, as it is employed about the ideas it has got" (II., i., 4). Berkeley has "such as are perceived by attending to the passions and operations of the mind". But whereas Locke places 'perception' first among the ideas of reflection and apologises for his 'enlarged' use of the word operation to include certain passions, such as satisfaction or uneasiness, arising from ideas, Berkeley's *only* examples of this class are 'the passions of love, hatred, joy, grief, and so forth'. These passions are a set of knowable objects distinct from apples and other physical things and from the qualitative determinations of which these are combinations: they represent something made by the mind's own motion, pertaining therefore in a general sense to mental activity.

It is worth noticing that this treatment of ideas of reflection is precisely followed by Hume at the beginning of the Treatise. After explaining his distinction between impression and idea, and the division of each into simple and complex, he proceeds to divide impressions into those of Sensation and those of Reflection these latter being "posterior to those of sensation and derived from them". He says that the impressions of reflection "which

principally deserve our attention" are "passions, desires and emotions". He never, so far as I know, gives any reason for not calling memory or perception, or the two species of perception, impression and idea, ideas of reflection, but like Berkeley, he departs from Locke's precedent, silently excluding these and confining the term to passions and emotions.

IV.

To come back to the opening passage of the *Principles*—I agree with Professor Hicks that some degree of oversight on Berkeley's part is required to account for these sentences, but I do not think that the oversight is as serious as he makes it out to be. On his view the passage seems to be almost completely out of place and its survival inexplicable: on my view it involves inconsistencies but these are mainly verbal. So far as they are not, the passage is only one of many passages which show that Berkeley, when he published the *Principles* and the *Dialogues*, had not fully cleared up his own thoughts on the all-important question what mind is and how it is known. Neither in this passage nor as far as I know in any other does Berkeley follow Locke in postulating an internal¹ sense, co-ordinate with the external senses. The doctrine common to all his works from the *Principles* to *Alciphron* is stated in *Alc.* VII. "An agent, therefore, an active mind or spirit, cannot be an idea or like an idea. Whence it should seem to follow that those words which denote an active principle, soul, or spirit do not in a strict and proper sense, stand for ideas. And yet they are not insignificant neither; since I understand what is signified by the term I or myself, or know what it means: although it be no idea, or like an idea, but that which thinks and wills and apprehends ideas and operates about them" (ii., 327).

Now at the beginning of the *Principles* the paragraph giving the triple classification of objects of knowledge, which we have been discussing, is immediately followed by a short paragraph in which this doctrine is outlined. I had better quote it in full. "But besides all that endless variety of ideas or objects of knowledge, there is likewise something which knows or perceives them, and exercises divers operations, as willing, imagining, remembering, etc. about them. This perceiving, active being is what

¹ He uses 'interior sense' = Hutcheson's moral sense and aesthetic sense—but only in the traditional meaning of a sense of which the *organ* is not external—not in the Lockian meaning of a sense of which the field is internal (*Alc.* I., *Works*, ii., p. 125).

I call *mind, spirit, soul, or myself*. By which words I do not denote any one of my ideas, but a thing entirely distinct from them, wherein they exist, or, which is the same thing, whereby they are perceived—for the existence of an idea consists in being perceived.” The opening words imply, I think, pretty clearly the equivalence of *idea* and *objects of knowledge*; and the existence of an active self is asserted distinct from and in a sense including all of them.¹ The first argument for *esse* is *percipi*, given in the next paragraph, makes use of the triple classification, “That neither our thoughts, nor passions, nor ideas formed by the imagination, exist without the mind is what everybody will allow. And to me it is no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (that is, whatever objects they compose), cannot exist otherwise than in a mind perceiving them.” *I.e.*, Class 3 (passions) are plainly included in mind; “much of” Class 2 (thoughts and imaginary objects) are equally plainly included; why not also the rest? To be, in short, is no more than to be perceived.

The passions are introduced here as objects of which it is evidently true that their *esse* is *percipi*. They exist as felt or perceived and not otherwise. They thus represent the thin end of Berkeley’s wedge. They are needed for his argument, and they are needed precisely because no one is likely to deny that their *esse* is *percipi*. Does that prove that they are ideas? Or are there other things beside ideas whose *esse* is *percipi*? I ask questions which I cannot answer. But I would point out that the word “passions” is sandwiched between “thoughts” and “ideas formed by the imagination” and that all are said to be instances of objects of which no one will assert existence outside the mind. So that we cannot represent anything as necessarily following from this passage as to the status of the passions which we are not prepared also to apply to ideas of imagination and thoughts. Are ‘thoughts’ also ‘ideas’, or does the distinction between *concipi* and *percipi* require a difference of name?

Whatever may be the answer to these questions, it is evident that Berkeley did not remain satisfied with the position occupied in paragraphs 1 and 2 of the *Principles*. There the Self or Subject is on one side, and all objects of discourse apparently are on the other. Perhaps he saw, as he well might, an obstacle to this position in his own attack on abstraction. Anyway the

¹ Prof. Luce in his *Berkeley and Malebranche*, pp. 72 ff., accepts Johnston’s view of the opening sentences of the *Principles*; but he does not bring any new argument in its favour, and he does not examine the context, and he is silent about the passage in question here.

corrections inserted in later editions definitely remove the passions and operations of the mind from the class 'idea'. Euphranor's statement about the self in *Alc.* VII, already quoted, has added to it in the 3rd edition the following words. After "that which thinks, and wills, and apprehends ideas, and operates about them" it continues—"Certainly it must be allowed that we have some notion, and that we understand or know what is meant by, the terms myself, will, memory, love, hate, and so forth; although, to speak exactly, these words do not suggest so many distinct ideas." Love and hatred are two of the passions mentioned in *Principles*, § 1.

V.

On this side of Berkeley's doctrine then there is undoubtedly some vacillation and inconsistency, which he was inclined to dismiss as a secondary question of terminology, but which probably involves a good deal more than that. The positive side of his doctrine, the doctrine of Spirit, was not fully developed when he wrote, and was in fact never fully developed. The alterations inserted in the later editions are fairly obvious makeshifts to cover gaps in his argument of which he was increasingly conscious. I suppose Part II. of the *Principles*, in which he says he had made "considerable progress" before he lost the manuscript during his travels in Italy,¹ would have developed this side of his thought, but it may be doubted whether Berkeley's failure to write it was not due more to his failure to think out what was to be said to his own satisfaction than to the loss of a partially completed manuscript.

Through all these doubts and hesitations, however, Berkeley seems to have clung consistently to his refusal to make a distinction between the perception and the thing perceived. One of his main arguments falls to the ground at once if this distinction is made. "For an idea to exist in an unperceiving thing is a manifest contradiction, for to have an idea is all one as to perceive: that therefore wherein colour, figure, and the like qualities exist must perceive them; hence it is clear there can be no unthinking substance or *substratum* of those ideas" (*Prin.* 7). It is common to meet this argument, as Russell meets it,² by accusing it of 'gross confusion'. "There are two quite distinct things to be

¹ In his letter of June, 1729, to S. Johnson, he says that this happened 'about 14 yrs ago'. The reference must be to his stay in Italy with Peterborough in 1714.

² *Problems of Philosophy*, ch. iv.

considered whenever an idea is before the mind. There is, on the one hand, the thing of which we are aware—say the colour of my table—and on the other hand the actual awareness itself, the mental act of apprehending the thing. . . . Berkeley's view . . . seems to depend for its plausibility upon confusing the thing apprehended with the act of apprehension. Either of these might be called an idea ; probably either would have been called an idea by Berkeley. The act is undoubtedly in the mind ; hence when we are thinking of the act, we readily assent to the view that ideas must be in the mind. Then, forgetting that this was only true when ideas were taken as acts of apprehension, we transfer the proposition that " ideas are in the mind " to ideas in the other sense, *i.e.*, to the things apprehended by our acts of apprehension. Thus, by an unconscious equivocation, we arrive at the conclusion that whatever we can apprehend must be in our minds. This seems to be the true analysis of Berkeley's argument, and the ultimate fallacy upon which it rests."

This is, as I say, a common type of rejoinder to Berkeley, often taken as final, but it is important to realise in regard to it that though its substantial contention may be correct its basis is unsound. The confusion (or perhaps rather fusion) of apprehension and apprehended is no unconscious equivocation in Berkeley, whatever it may be in his readers : it was a deliberate and fully conscious article of his belief. He does not doubt, but emphatically asserts, that perception involves a perceiver as well as a perceived, and he does not characterise these two orders of being in the same terms but in terms of diametrical opposition like the Body and Mind of Descartes. By 'in mind', as he explains in answer to the 5th Objection (p. 49), he means presence to consciousness as perceived object : otherwise he would be involved in the absurdity of treating mind as extended and coloured. Berkeley cannot be shown anywhere to make an illegitimate transition of the kind suggested between two senses of the word idea. He makes nearly all the distinctions which the objection requires : only he refuses obstinately to make the distinction between perception and the perceived.

VI.

It is worth noticing that in this also Hume followed him. The famous and much praised Appendix to the *Treatise*, in which Hume expresses his inability to solve the problem of personal identity, repeats most of the peculiar features of Berkeley's

position. 'This table' and 'that chimney' are called 'perceptions', and the self is said to be 'the composition of these'. "When I turn my reflexion on myself, I never can perceive this self without some one or more perceptions; nor can I ever perceive anything but the perceptions." The argument by which Hume succeeds in 'loosening', as he says, 'all our particular perceptions' is full of the 'gross confusion' which Russell finds in Berkeley. The crucial passage runs as follows—"All ideas are borrowed from preceding perceptions. Our ideas of objects, therefore, are derived from that source. Consequently no proposition can be intelligible or consistent with regard to objects, which is not so with regard to perceptions. But 'tis intelligible and consistent to say that objects exist distinct and independent, without any common simple substance or subject of inhesion. This proposition therefore can never be absurd with regard to perceptions."

The first part of this is clearly in line with the entry in the *Commonplace Book* already quoted (506), "Mind is a congeries perceptions. Take away perceptions and you take away the mind. Put the perceptions and you put the mind." The distinction between objects and perceptions which follows seems to involve the distinction which Berkeley rejects between the perception and the thing perceived. It must at least stand for a distinction between the perception in its perceived "philosophical" characters and relations, and the perception in its "natural" biographical character and relations. But this distinction is no sooner made than it is in effect undone by the explicit assertion that an ascertained character of the one order may also be credited to the other order. The separateness of things as perceived, their lack of any common dependence on a single source, suggests or even perhaps proves the absence of any substantial self as subject of the biographical judgment.

Is this also to be judged sheer confusion? The fact that the required distinction is actually made refutes, I think, the suggestion of unconscious equivocation. The probability is that he was consciously adopting Berkeley's position in this matter; and this view is confirmed by the discussion in Pt. IV., ii. of the evidence of the senses. "Philosophers . . .," we there read, "distinguish betwixt perceptions and objects, of which the former are supposed to be interrupted and perishing, and different at every different return; the latter to be uninterrupted, and to preserve a continued existence and identity. But however philosophical this new system may be esteemed, I assert that 'tis only a palliative remedy, and that it contains all the difficulties of the

vulgar system, with some others that are peculiar to itself" (ed. S. B., p. 211). If this philosophical hypothesis of double existence (as Hume calls it) is rejected, we are left with the single series of perceptions, intermittent and dependent on a perceiving mind, and this mind may be said to be composed of 'this table' and 'that chimney' and its other perceptions.

Berkeley's doctrine of Spirit is nowhere expounded in any fullness, but it is evident that his difference from Locke is much greater than historians of philosophy sometimes represent it as being. Locke had the Cartesian scheme with characteristic but symmetrical modifications—on the one side material substance revealed by the external senses, on the other side spiritual substance revealed by an internal sense (reflection). Berkeley abolishes not (as is sometimes supposed) merely one of these factors but both.¹ Sensation, he argues, implies no material substance, and our knowledge of the self does not rest on any internal sense. Possibly for "and" in that last sentence one should read "because". The abolition of reflection is, I suggest, the pivot on which his argument turns. Now Hume accepts the whole of this, including Berkeley's destruction of soul-substance as asserted by Locke. Only he turns a blind or wilfully agnostic eye to Berkeley's unexamined thesis that Spirit is directly and continuously self-revealed in its activity, that no activity other than Spiritual is known to us, and that the fabric of human finite experience requires for its explanation a twofold Spiritual activity, which admittedly experience cannot directly reveal—the finite thought and will which organise this experience from within, and the infinite thought and will which control it from without. Hume's correction is in principle simply agnostic. Experience, he concedes, is precisely as Berkeley described it. Berkeley's mistake was to suppose that he had good evidence as to the causes on which it depends. It is safer and truer to say that it depends on unknown causes.

VII.

I will end by tabulating the main points of this paper.

1. A query as to the connection of Berkeley's rejection of abstract ideas and his assertion of the principle *esse est percipi*.

¹ By this I do not mean that Berkeley did not believe in Spirit, but that the corrections which he introduced into Locke's scheme involved not merely the denial of material substance but also the provision of an alternative basis for the belief in Spirit. The great weakness of the *Principles* as a philosophic argument is that this second positive task is never really faced.

2. A suggestion that the abolition of ideas of reflection is more vital to Berkeley's position than has commonly been realised.

3. This abolition of ideas of reflection is not, or is not always, complete, especially in regard to the passions.

4. Berkeley's position on this point becomes more intelligible if he is compared with Hume, who allows ideas of reflexion in this limited sense.

5. Berkeley is firm in refusing to admit 'perception' as an idea of reflection.

6. Hume again follows him here.

7. An unresolved problem : how the resulting position is to be understood ?

IV.—THE PROBLEM OF INFERENCE.

BY HAROLD JEFFREYS.

I. INDUCTIVE INFERENCE.

INFERENCE from empirical data is prominent in all branches of science. An astronomer accepts without question the predicted positions of the planets as given in the Nautical Almanac; a botanist is equally confident that the plant that grows from a mustard seed will have yellow flowers with four long and two short stamens. In both cases the predictions are made by way of general laws inferred from a large number of previous observations. This type of inference is not confined to what is usually called science, but pervades ordinary life and even art. When I taste the contents of a jar labelled 'raspberry jam' I expect a definite sensation, inferred from previous instances; when a musical composer scores a bar he is expecting a definite series of sounds when an orchestra carries out his instructions.

Such inference is not covered by ordinary logic. No matter how many instances of a general proposition have been verified, it remains formally possible that the next may prove to be an exception. This, however, is no objection; it merely says that inductive inference involves some principle that is not part of pure logic. To deny inductive inference is to deny that we can learn from experience. We cannot justify it by logic; all that we can say is that we do believe that we can learn from experience, and try to state fundamental principles that will enable us to express this belief. Even pure logic is somewhat suspect on this kind of ground. It starts from fundamental postulates that we cannot prove, but that are held to be obvious *a priori*. But the school of Hilbert denies that they are obvious, and regards logic and mathematics as consisting of meaningless marks on paper manipulated according to arbitrary rules; and it cannot be proved that such a view is wrong. The logical school of Whitehead and Russell would regard the proposition $2 + 2 = 3 + 1$ as proved for all possible worlds. But if every entity removed from a

2-class and added to another 2-class disappeared or was converted into two, the practical application of this proposition would be seriously damaged; and if we say that such things do not happen we are making a statement about our world, which can be justified only by experience and not by logic. Russell and Whitehead would say that in such a world the proposition would remain true, but would admit the behaviour of actual entities as above described. I am not concerned here with the correctness of the divergent opinions; I wish only to point out that logic and pure mathematics are not demonstrable, and that if we believe them it is not because they are proved, but because we believe their postulates. If we believe them on this ground we may as well be prepared to accept inductive inference also on the ground that it corresponds to general human belief. That it does so correspond is, I think, sufficiently clear. A critic is himself using such inference when he expects his words to convey the same meaning to his audience as they do to himself, or when he expects a certain correspondence between the forms of his written words and those that subsequently appear in print.

It appears that inductive inference comes before the notion of reality or of the external world. An object is held to exist because it enables us to co-ordinate certain sensations and to infer others from them. The distinction between an object and a dream is not an immediate one; children may take a dream to be an observed fact until they recognise that its relation to other data lacks the continuity that we observe in what we call sensations of the same object. Now in psychoanalytic language the Ego is defined as the part of the personality that maintains adjustment to reality; on this definition, then, inductive inference rests at the very foundation of the Ego.

Logic, given its possibly dubious premises, has been developed to an enormous extent. The development of inductive inference is much less extensive. Several reasons may be given for this. Its premises are so deeply involved in the personality that they can be applied unconsciously, and it is only by examination of actual thought processes that they can be detected. Its conclusions, involving degrees of probability, are more complicated than those of logic, which are limited to a simple 'yes' or 'no'. Any inductive inference involves the possibility of error in its very nature. Exceptions are always possible, and if a theory does not provide for them it is necessarily imperfect. Logic and mathematics become more difficult as they advance, on account of the number of different ideas that must be held in consciousness simultaneously; and the extra complication of inductive infer-

ence prevents as complete a development as is attainable in pure mathematics.

Nevertheless it may reasonably be expected that a self-consistent theory of inductive inference can be constructed. Such a theory must take into account the fact that inferences are reasonable, but not absolutely certain; that is, it must be a theory of probability, in the everyday meaning of the term. Further, the probability does not depend on the inference alone, but also on the data available; here there is a great difference between pure mathematics and induction. In pure mathematics a general proposition is definitely true or false; additional information can at the most confirm what we know already; if additional information contradicted what we know already pure mathematics would not be self-consistent. In inductive inference, on the other hand, two different sets of facts may give high probabilities to entirely different inferences when taken separately, and when the two are taken together the most probable inference may be different again. The fundamental idea in inductive inference is therefore the probability of a proposition given certain data.¹ The notation must therefore take the form $P(p|q)$, denoting the probability of the proposition p on the data q . The fundamental rules connecting probabilities seem to have been given first by T. Bayes in 1763, who, however, did not take probability as a fundamental idea, but defined it in terms of the value of an expectation. This method has two advantages. We have habitually to decide on the best course of action in given circumstances, in other words to compare the expectations of the benefits that may arise from different actions; hence a theory of expectation is possibly more needed than one of pure probability. Further, one proposition that has to be taken as an axiom if probability is taken as a fundamental idea can be proved in terms of expectation. A more detailed analysis than that of Bayes has been given by F. P. Ramsey.² All forms of the theory lead to the principle of inverse probability, which enables us to compare the probabilities of hypotheses after experimental tests, given their probabilities before the tests; and even if the prior probabilities are not assessed it tells us whether the tests make a hypothesis more or less probable than it was before.

¹ According to P. W. Bridgman (*Scripta Mathematica* 2, 1934, 1-29) several of the paradoxes of higher pure logic disappear if the data are specified as those available at a particular moment of time; logic, like inductive inference, becomes a theory of knowledge.

² *The Foundations of Mathematics*, 177-182.

II. ASSESSMENT OF PRIOR PROBABILITIES.

The theory is self-consistent, but for definiteness requires a knowledge of the prior probabilities. Thus if p and $\sim p$ are a hypothesis and its negative, θ a set of experimental data, and h our previous knowledge, we can prove the proposition

$$\frac{P(p|\theta h)}{P(\sim p|\theta h)} = \frac{P(\theta|ph)}{P(\theta|\sim p \cdot h)} \frac{P(p|h)}{P(\sim p|h)}.$$

But $P(p|\theta h) + P(\sim p|\theta h) = 1$; $P(p|h) + P(\sim p|h) = 1$. Hence we see easily that if $P(p|h)$ is known, $P(p|\theta h)$ is determinate, and conversely. If probabilities are known on any data, it is therefore possible to assess them on any other data. In practice we are usually interested in the effect of additional information, so that we proceed from $P(p|h)$ to $P(p|\theta h)$. In the last resort, however, we need for a complete solution the probability of a hypothesis before any relevant observational information is available. One of our problems, therefore, is to decide how to assess this number. There are several possible attitudes to our estimate.

The 'objective' theory is applicable in games of chance, where we know all the possible alternatives, all equally likely for some physical reason, as in a deal at bridge. Then it is theoretically a simple matter, given the composition of one's own hand and that of dummy, to estimate the probabilities of various possible partitions of the cards between the other two hands. This case, however, hardly concerns us. Our theory applies to it, but the whole class of all possible deals is perfectly definite, and a particular deal tells us nothing about it that we did not know already: except indeed in the case of imperfect shuffling, when the postulate that all deals are equally likely is untrue. In fact the objective theory is hardly ever what we want.

The kind of solution needed is attempted for simple sampling by the Bayes-Laplace theory. We have a large class, of number n , and wish to estimate how many members have a property ϕ , without counting the entire class. We do it by extracting a sample, in which we find that l members have the property and m have not. Then it would be generally agreed that the most probable number of ϕ 's in the original class is the integer nearest to $nl/(l+m)$. But this is found to be true only if the prior probabilities of all numbers of ϕ 's in the original class, other than 0 and n , are equal. Bayes and Laplace took this to hold for 0 and n as well, so that the prior probability of any particular

number of ϕ 's is $1/(n+1)$. The present argument, however, leads to an indeterminacy in the extreme cases. This does not affect the results when neither l nor m is zero, the extreme cases being then demonstrably excluded. Then the theory gives the distribution of the posterior probability of possible numbers of ϕ 's in the original class completely.

The indeterminacy shown by this argument when the sample is pure in respect of the property under examination requires further examination. If $m = 0$, the Bayes-Laplace theory gives $(l+1)/(n+1)$ for the probability that all members of the original class have the property;¹ thus we cannot attribute a high probability to a general rule until nearly the whole class has been examined. This plainly does not correspond to ordinary belief, which is our only ultimate criterion in assessments of probability. The point was, I think, first made by Karl Pearson,² and later by C. D. Broad.³ Pearson and I have suggested solutions. My solution⁴ is that when we begin an investigation we do in fact consider seriously the possibility that the class is homogeneous in respect of the property considered; if we take the alternatives that the members are all ϕ 's, all not- ϕ 's, or some ϕ 's and some not ϕ 's, as equivalent, all with prior probability $\frac{1}{3}$, we get results in accordance with ordinary belief. The compositions of mixed classes are taken as all equally probable, for our previous reason, but the extreme cases are treated as exceptional from the start. This distribution is taken as an *a priori* statement. Pearson, while recognising the exceptional character of the extreme cases, regards it as an inference from previous results. A chemist, after analysing a new compound, will infer that a compound prepared under similar conditions will always give the same analysis; he asserts a general law from a single instance. This is not covered by Laplace's theory, or even by mine. It is inferred from the fact that in all previous cases specimens of compounds prepared under similar conditions have given the same analysis; this leads to a general law, which has a high probability on my theory, but not on Laplace's. The application to another compound is inferred from it, and has a high probability on Laplace's theory and a still higher one on mine. The belief that a plant reared from seed will resemble its parent in the characters recognised to be of specific value is of the same form. I think, therefore, that Pearson's explanation is correct for this type of inference.

¹ Cf. Jeffreys, *Scientific Inference*, chap. iii.

² *The Grammar of Science*, 141-150.

³ *MIND*, 27, 389-404 (1918).

⁴ *Proc. Camb. Phil. Soc.*, 29, 83-87 (1933).

It does not, however, begin at the beginning. The law of constant chemical composition in compounds had first to be established for a few compounds, and it would never have acquired a high probability as a general statement for even one compound if Laplace's theory was applied. Accordingly I think that Laplace's assignment of the prior probability fails at the extremes from the very start, because it contradicts our belief that general laws can be established by an amount of evidence that is available in practice.

It appears, however, that my supposition can apply only to the beginning of a subject. It might apply to the first compound analysed; but when one compound is found to have a constant composition a generalisation to all compounds is suggested; this generalisation might have prior probability $\frac{1}{3}$; but when it has received some verification it gives information about further compounds, and the prior probability, at our present state of chemical knowledge, that a new compound found will have a constant composition is so high that direct test is hardly worth making. The second generalisation has a more complicated structure than the first, analogous to the differences of logical type that are recognised in mathematical logic. We must ask, however, whether all generalisations that are suggested can be treated as having prior probability $\frac{1}{3}$ even in the beginnings of a subject?

The significance of this question requires a reference to the theorem of James Bernoulli. This states that if the probability of a ϕ at any trial is α , then if we take a large number of trials the proportion of ϕ 's to the total number of trials is probably very near α . In fact if the number of trials is n , the proportion of ϕ 's is practically certain not to differ from α by more than a quantity of order n^{-1} . The theorem is applicable only if the probability is α at every trial, whatever the results of previous trials may have been. It does not hold if the results of previous trials give any information about the next. In most cases they do give such information, and the scope of the theorem is accordingly limited. It will apply to the throw of a coin or a die that we previously know to be unbiased, but not if we are throwing it with the object of determining the degree of bias. It will apply to measurements when we know the true value and the law of error already, but not if we are trying to find the true value and the parameters in the error law. This type of probability has been called 'chance' by N. R. Campbell and M. S. Bartlett. It is not numerically assessable except when we know so much about the system already that we need to know no more, but it is an

important factor in the probability of the parameters given the observations.

If, however, we attribute the same numerical value to the prior probability of the first generalisation made in any subject, it might appear that Bernoulli's theorem could be applied to a large number of subjects. Then it would say that without any observational evidence at all there is a practical certainty that a general law will hold in about $\frac{2}{3}$ of the subjects examined, the two extreme cases being taken together as both expressing general laws. This seems absurd ; but the only alternative is that the correctness of a generalisation in one subject is in fact relevant to one in another subject, so that the theorem is not applicable. It seems remarkable that this theorem, which has seemed to many to be of such fundamental importance that they have tried to convert it into a definition of probability, should prove to have no application whatever except where we know all about the system under investigation already ; but there is apparently no alternative that anybody would be likely to admit. The theorem may be true as an approximation in the case of a large number of equal posterior probabilities all based on a large amount of evidence ; that is a matter for further investigation. If then the truth of a generalisation has some relevance to the probability of one in an apparently different subject, the frequency with which suggested general laws have turned out to be true is one of the data that we need at the beginning of any new investigation. This deals only with what we have already found out, but unfortunately it deals largely with what we have forgotten. Psychoanalysis may be able to provide information about the frequency of correct generalisations made in infancy, but it should be said that many generalisations are made at that stage without being recognised as such by the outside observer. The inference of an external object from sensations depends on the possibility of repeating sensations. The fact that infantile phantasies usually turn out to be wrong is not immediately relevant, because they have a complicated structure and depend on a number of component inferences many of which are correct ; though the same fact may contribute to the extreme suspicion of generalisation that many people profess but none act on in any matter that concerns them personally. But whatever the ratio may be for our earliest generalisations, it is modified later in two opposite ways. Discovery of general laws tends to exhaust those available for discovery ; on the other hand it suggests directions that may repay investigation ; and it is anything but obvious which effect is the greater as regards the generalisations that we

actually think worth testing. It appears therefore that the most directly relevant datum would be the fraction of the generalisations suggested recently that have stood verification ; but even this is inaccessible because the majority of the failures have been detected by their authors and not published.

III. A SUGGESTED WORKING RULE.

It appears therefore that an assessment of the prior probability of a general law, however desirable theoretically, is not attainable in practice. Yet some approximation is needed, otherwise we have no criterion of correctness at all. It must satisfy certain conditions : it must be practically applicable, and results based on it must agree in general terms with what we actually believe. We cannot prove the validity of inference, but we should be able to state rules for its consistency that will agree with ordinary behaviour. We cannot in most cases state all the alternatives that are logically possible ; we can only compare those that anybody has thought of. All such hypotheses should have the same prior probability, even if the numbers of people that have thought of various hypotheses are unequal. If in a given state of knowledge A and B think of one hypothesis and C of another, that does not mean that A and B are more likely to be right ; it is more likely to be due to a mental difference between them and C, and the proper procedure is to treat the hypotheses on the same footing until they can be compared with actual data. In other words, a formally complete theory would involve the statement of all alternatives that are logically possible and the assessment of their probabilities on the whole of the data available to us. In practice we are limited in two ways. The alternatives are not always all consciously recognised, and their formal statement is replaced by intuition. The function of intuition is therefore to state alternatives, and that of observation is to decide between the alternatives suggested by intuition. For two people to have the same intuition does not make the statement of alternatives more complete. Further, the information that a person can handle at any one moment, is only a fraction of what he could remember if he tried for a long time, so that his estimate of a probability does not rest on the whole of his actual knowledge, but only on the part of it that he deems to be relevant. Thus for both reasons assessments of probabilities can only be approximate. In practice again, however, mutual discussion can reduce the inaccuracy in two ways, by making both the intuitions of other persons and their relevant knowledge accessible to the actual

investigator. If a new hypothesis is suggested later a certain amount of revision will be needed. This procedure corresponds to what has happened at various stages of the development of quantum theory.

Some warnings are needed about the application of such a rule. Obviously it cannot be made the basis of an immediate application of Bernoulli's theorem. We are not usually satisfied with probabilities in the neighbourhood of $\frac{1}{2}$; if our available knowledge leaves the posterior probability of a law in this region, more observations or more crucial ones will be made until the probability approaches 0 or 1. The rule then merely gives an indication of how many observations are needed, and an error in the assessment of the prior probability, within limits, will not affect this seriously. (Laplace's estimate, as stated above, is beyond reasonable limits.) It might appear that if only one alternative is suggested its prior probability should be taken as unity; but this is not so, for any hypothesis suggests at least one denial of it. It is capable of solving the problem of significance tests. Given two sets of observations leading to estimates of quantities of the same kind, we can establish a condition that the results may be considered to indicate a systematic difference or not;¹ and in the latter case the results may be combined statistically. The assessment does not apply to the investigation of the consequences of laws already well established; in this case the deductive method is a good approximation so long as we do not forget that in the last resort it is a substitute for induction. Equally of course it does not apply to hypotheses inconsistent with well-established laws. It must be reserved for cases of genuine serious doubt. It may be objected that this is introducing psychology into physics, but it appears that we cannot exclude psychological considerations even from pure mathematics, and in practice they enter all branches of science at every stage. What we can do, however, is to notice their nature and make explicit allowance for them. The human mind is our most important tool, and we cannot afford to neglect its properties; but so far as it is an imperfect tool we shall eliminate its imperfections better by putting them where we can see them and prevent them from intruding surreptitiously.

IV. RELATION TO PSYCHOANALYSIS.

It appears that the theory of probability is a formal statement of an ideal system of rational thought, designed to cover inference

¹ *Proc. Camb. Phil. Soc.*, 31, 203-222, 1935.

from observation. Actual thought is at best an approximation to such a system. The theory, however, suggests some questions with reference to psychoanalytic theory. Infantile phantasies are sometimes condemned because some of them are untrue; so are scientific hypotheses. On the theory of probability this attitude is as fundamentally fallacious as the opinion that any scientific hypothesis is *a priori* certain. It is to be expected that inferences from experience will sometimes cease to be the most probable available when new data are obtained; the most that we can hope for is that they will be the most probable on the data when they are actually made. I suggest, therefore, that the mere fact that infantile phantasies are often untrue is perfectly consistent with their being valid inferences in the scientific sense on the data available at the time. A belief becomes irrational only when it is still retained when it is no longer the most probable inference on the data. On such a view the Super-Ego may be merely the infantile thoughts, originally belonging to the Ego, that have failed to adapt themselves to new data; and repression is largely synonymous with failure of this adaptation and resolution with its success. Dr. Melanie Klein has already commented on early disturbances of the epistemophilic instinct.¹ The emotional factor seems to enter into the scheme by directing the interest and therefore indicating what problems to investigate. This will remain true with the most perfect reasoner, and a problem that fails to arouse any emotion will remain uninvestigated. In a sense it is therefore extraneous to the theory of inference, which can in practice deal with only those problems that we do investigate. The possibility that there may be in the world a vast body of truth that will never arouse any human interest and will therefore always remain unknown may be admitted without altering anybody's behaviour. Actual thought differs from the ideal in two respects: failure to recognise all the possibilities logically possible, and failure to assimilate all the data. Both these imperfections are certainly present in very different degrees in different individuals. To some extent they are probably inevitable, quite apart from the emotional disturbances (themselves based on an inference of danger) mentioned by Dr. Klein; but it would be interesting to know whether there is any constitutional incapacity of either type that can contribute to the difficulty of resolving the emotional disturbance when it arises.

¹ *Psychoanalysis of Children*, 242, 249.

V.—THE ENIGMA OF HUME.

BY ERNEST C. MOSSNER.

THE challenge of Hume's maturest and best written work, the *Dialogues Concerning Natural Religion*, has seldom been completely ignored by even the most cursory reader. But attempts at exegesis have hitherto been thwarted by the antecedent question of the identity of the three interlocutors. Demea, Cleanthes, and Philo present a problem which in itself has fascinated thoughtful readers from the time of the posthumous publication of the *Dialogues* in 1779 down to the present day. Many have been the conjectures, but seldom has any attempt been made at substantiation. The obvious inference that the sceptic Philo is Hume himself, pious thinkers have ever been reluctant to face. But the justice of this identification has recently been placed beyond all reasonable doubt by the cogent evidence assembled by Professor Norman Kemp Smith in the excellent introduction to his edition of the *Dialogues* for the Clarendon Press. There is no need to enumerate here Professor Smith's arguments; his general contention "that Philo, from start to finish, represents Hume," may be accepted unquestioned.¹ But his inadvertent admission in passing that "something" of Hume's "own beliefs" has been "put into the mouths" of both Demea and Cleanthes unfortunately confuses further investigation into the identity of those two characters.²

That Demea and Cleanthes at times voice opinions that Hume himself would subscribe to is indubitable but beside the point. Though the three protagonists may actually hold a few inconsequentialities in common, and though they may even be somewhat inconsistent, they are nevertheless three in number precisely because Hume wished to present three distinct opinions concerning Natural Religion. "The remarkable contrast in their char-

¹ *Hume's Dialogues Concerning Natural Religion* (edited with an introduction by N. K. Smith, Oxford, 1935), p. 76. This edition will be used throughout. The book was reviewed in *The Times Literary Supplement* (November 2, 1935) under the caption, "The Enigma of Hume."

² *Ibid.*, p. 74.

acters" observed by Pamphilus, himself "a mere auditor of their disputes," is accurately reflected in the remarkable contrast in their viewpoints.¹ Two of these viewpoints are theistic; the third is sceptical, for Professor Smith has made perfectly clear that Philo's occasional gestures toward faith in "revelation" are at best but conventional in a work of which the author himself boasted "that nothing can be more cautiously and more artfully written."² If Hume assuredly is the sceptic, the two theists still remain unknown. It is, of course, not impossible that Demea and Cleanthes meant to Hume no more than two typical theistic systems; yet psychologically it seems much more likely that he fancied himself as arguing personally with two real divines. Moreover Hume's acknowledged reaction to his upbringing and early religious training would insure the two divines' being British rather than Scottish. Certainly neither one exhibits the slightest tendency towards Calvinism. The probable prototypes that conditioned Hume's thinking during the composition of the *Dialogues* are therefore to be found in an historical review of the contemporary religious situation in England.

In the first half of the eighteenth century two schools of religious thought flourished in the Anglican Church, the dogmatic *a priori* group modifying the philosophical systems of Descartes, Spinoza, and Leibniz and finding its spokesman in Samuel Clarke, and the more recent *a posteriori* group evolving a religious philosophy from the groundwork of John Locke and best represented by Joseph Butler. The first group tended to be "Low Church" in doctrine, the second "High Church." Both groups had been influenced by the New Science, especially as directed by Isaac Newton, but the first group was most impressed by Newton's mathematics, the second by his empiricism. Among important intellectual leaders the latter group was slowly gaining a mastery over the former. By 1750 the victory was virtually complete. In the second half of the century this dominance resulted in the formation of the narrowly empirical school of theology headed by William Paley at Cambridge University. Yet empirical theology until well into the nineteenth century never distinctively affected the inert mass of Church underlings, who continued to retain much of Clarke's dogmatic attitude. Clarke and Butler were thus the most ready theologians for Hume to cast in the rôles of Demea and Cleanthes, not only because of their actual leadership of their respective apologetical factions,

¹ *Dialogues*, p. 159.

² *Letters of David Hume* (edited by J. Y. T. Greig, Oxford, 1932), II., 334.

but because of their specific intellectual relationship to the arch-sceptic himself.

To identify Demea as Clarke may seem on first consideration unfair to Clarke. Yet Hume always held Clarke in low esteem. He opposed Clarke's location of the source of moral distinctions in reason. He opposed Clarke's systematization of theology on the abstract mathematical model. He opposed Clarke's disingenuousness on the question of causality. Above all, Hume was rankled by Clarke's metaphysical arrogance.¹ And he ultimately came to feel for Clarke something akin to contempt. Even Alexander Pope had been prone to make the "gloomy Clerk" profess:

We nobly take the high Priori Road,
And reason downward, till we doubt of God.²

Little fairness might therefore be expected of Hume toward that divine who in the Preface to his *Demonstration of the Being and Attributes of God* avowed a method "which I have endeavoured should be as near to Mathematical, as the Nature of such a Discourse would allow."³ So in the *Dialogues* Cleanthes and Philo, who live together "in unreserved intimacy," display scant respect for a "rigid inflexible orthodoxy" content to accept its first principles without factual investigation, and from them to deduce a conclusion as demonstrably certain as the proposition that the sum of the three angles of a triangle is equal to two right angles.⁴ In fact Philo becomes so strong in "his spirit of opposition, and his censure of established opinions" that Demea finally takes occasion "on some pretence or other, to leave the company."⁵

Before Demea's pusillanimous retreat it was Cleanthes as well as Philo who devastatingly blasted the abstractions of "the haughty dogmatist."⁶ "I shall not leave it to Philo, said Cleanthes, . . . to point out the weakness of this metaphysical reasoning," and Cleanthes proceeds to cite and to refute an argument of Clarke's.⁷ In this connection it ought not to be over-

¹ On these points, cf. some typical passages in *Philosophical Works of David Hume* (edited by T. H. Green and T. H. Grose. New edition. London, 1882): I., 337 and n., 382 and n.; II., 239 ff.; IV., 190-191 and n.

² *Dunciad*, IV., 471-472.

³ Samuel Clarke, *Demonstration of the Being and Attributes of God* (9th edition, London, 1738), Preface. Clarke occasionally, however, falls back upon a *a posteriori* reasoning.

⁴ *Dialogues*, pp. 264 and 153. Clarke makes the Euclidean comparison, *op. cit.*, pp. 126-127.

⁵ *Ibid.*, p. 263.

⁶ *Ibid.*, p. 282.

⁷ *Ibid.*, pp. 232-234

looked that Butler, early in his career, had indulged in noteworthy controversy with Clarke on precisely the point at issue, and that in his own later works he eschewed the "high Priori Road" of Clarke and Descartes for the experimental one of Locke.

Let us then [Butler had cautioned], instead of that idle and not very innocent employment of forming imaginary models of a world, and schemes of governing it, turn over our thoughts to what we experience to be the conduct of Nature with respect to intelligent creatures.¹

And Butler recognized that in giving up the *a priori* for the experiential approach to religion he was giving up dogmatic certainty, "but to Us [he said] probability is the very guide of life."² Cleanthes then, whom Hume for artistic and cautionary reasons was trying to insinuate as the "Hero of the Dialogue," was eminently suited by virtue of his historical genealogy to refute Demea.³ Philo, however, might add the concluding touch:

The argument *a priori* has seldom been found very convincing, except to people of a metaphysical head, who have accustomed themselves to abstract reasoning, and who finding from mathematics, that the understanding frequently leads to truth, through obscurity, and contrary to first appearances, have transferred the same habit of thinking to subjects where it ought not to have place. Other people, even of good sense and the best inclined to religion, feel always some deficiency in such arguments, though they are not perhaps able to explain distinctly where it lies. A certain proof, that men ever did, and ever will, derive their religion from other sources than from this species of reasoning.⁴

Under these circumstances Demea may best be taken to represent, perhaps not so much Clarke personally as the school of Clarke, a practical school of the rank and file of parochial clergy largely devoid of the metaphysical acumen of their once famous interpreter. This explanation accounts for the two seemingly irreconcilable sides of Demea. For Demea is at once the advocate, not only of the Clarkian *a priori* metaphysical argument, but also of the orthodox precepts common to "all pious divines and preachers", of "the obscurity of all philosophy," and of "the temerity of prying into his [Divine] nature and essence, decrees

¹ *Analogy of Religion*, Introduction, § 11 in two-volume edition of the *Works of Butler* (edited by J. H. Bernard, London, 1900). Cf. also *Sermons*, Preface, § 12 where Butler expressed the same preference in ethics. There are, however, a few passages in which he admits the *a priori* argument as subsidiary proof. The Clarke correspondence is in *Sermons*, pp. 311-339. Cf. also Clarke, *op. cit.*, p. 135, where Clarke specifically disclaims any indebtedness to Locke.

² *Analogy*, Introduction, § 3.

³ *Letters*, I., 153.

⁴ *Dialogues*, pp. 235-236.

and attributes.”¹ This explanation is therefore more useful than that, founded on an etymological key, of Professor Preserved Smith to the effect that Demea “presents the ordinary opinions of the masses.”² Such an assignment overlooks one complete aspect of Demea’s character; for who, it may well be asked, has ever heard the masses argue to “a necessarily existent Being”?³ The proof *a priori*, as has just been observed above in the passage quoted from Philo, is restricted to “people of a metaphysical head”; and Clarke himself had admitted that it can never “be made obvious to the Generality of men.”⁴ So “artfully” indeed does Hume manage the portrayal of Demea that an early critic of the *Dialogues* declares: “I have taken no notice of Hume’s Demea, because I cannot find a feature of Christianity about him. Dr. Clarke’s metaphysics and the Gospels, have, I think, no sort of connexion.”⁵ This statement also discloses how markedly Anglicanism had changed since the opening of the century when Clarkism was strong. As a caricature of Clarke voicing “the injudicious reasoning of our vulgar theology,” Demea is peremptorily dismissed by Hume before the finale of the *Dialogues*, to leave an unconfused theatre of disputation to the Lockian theologian and the sceptic.⁶

Though pretensions to mathematical demonstration of religious tenets might easily be brushed aside by any searching criticism, the argument from design remained a powerful weapon in the armory of the theist. To wrest this last support of the “religious hypothesis”⁷ from the hands of Cleanthes is Hume’s ambition in the *Dialogues*, and indeed his ultimate aim in that branch of philosophy touching upon final problems. Nor was Hume unaware of the prowess of his adversary.

When at the age of twenty-six Hume was negotiating the publication of his *Treatise of Human Nature*, written during the previous three years in France, he was already an admirer of Butler. Yet even at this date he was a trifle shy of the ecclesiastic who was then Clerk of the Closet to Queen Caroline and Prebendary of Rochester. Butler’s *Analogy of Religion* had appeared in 1736; his *Sermons on Human Nature* in 1726, and both of them had caused considerable stir among the thinking

¹ *Dialogues*, pp. 245, 161, 174. Clarke had denied the possibility of comprehending the Divine essence but claimed that many attributes “are strictly Demonstrable.” Cf., *op. cit.*, pp. 38-43.

² *History of Modern Culture* (London, 1930-), II., 524.

³ *Dialogues*, p. 232.

⁴ “Answer to a Sixth Letter,” *op. cit.*, p. 489.

⁵ Cf. Joseph Milner, *Works* (London, 1810), VIII., 169.

⁶ *Dialogues*, p. 262.

⁷ *Ibid.*, p. 267.

public in Scotland as well as in England.¹ Both of them were known to the youthful philosopher. In December, 1737, Hume wrote to Henry Home requesting an introduction to Butler for the purpose of securing his reading of the *Treatise* while still in manuscript :

Your thoughts and mine agree with respect to Dr. Butler, and I would be glad to be introduced to him. I am at present castrating my work, that is, cutting off its nobler parts ; that is, endeavouring it shall give as little offence as possible, before which, I could not pretend to put it into the Doctor's hands. This is a piece of cowardice, for which I blame myself, though I believe none of my friends will blame me. But I was resolved not to be an enthusiast in philosophy, while I was blaming other enthusiasms.²

Previously in the same letter Hume had mentioned "some *Reasonings concerning Miracles*, which I once thought of publishing with the rest, but which I am afraid will give too much offence, even as the world is disposed at present."² This excision of the first draft of the essay *Of Miracles* from the *Treatise* was unquestionably the most serious part of the operation of "castrating." Hume's respect for Butler was tempered only by consideration for his feelings.

In March, 1738, Hume again wrote Home of how he had called upon Butler in London to present the letter of introduction, only to discover him out of town. Hume continues, "I am a little anxious to have the Doctor's opinion. My own I dare not trust to ; both because it concerns myself, and because it is so variable, that I know not how to fix it."³ Later in the same year Butler, in fulfilment of the dying request of the queen, was elevated by George II. to the See of Bristol, and in February, 1739, Hume closed the episode of the *Treatise* by writing to Home, "I have sent the Bishop of Bristol a copy ; but could not wait on him with your letter after he had arrived at that dignity : At least I thought it would be to no purpose after I begun the printing."⁵ Still respectful, still somewhat in awe of Butler, Hume made no further effort to meet him in person. Ecclesiastical eminence he felt rendered that undesirable.

In any event it is unlikely that Butler would have proved of much assistance to Hume in the revision of the *Treatise*, inasmuch as he had previously refused to discuss philosophy with Henry

¹ This statement runs contrary to the general impression. The supporting evidence cannot be indicated here, but will appear in my forthcoming volume on *Bishop Butler and the Age of Reason*, Chapter VII.

² *Letters*, I., 25.

³ *Ibid.*, I., 24.

⁴ *Ibid.*, I., 25.

⁵ *Ibid.*, I., 27.

Hume himself "on the score of his own natural diffidence and reserve, his being unaccustomed to oral controversy, and his fear that the cause of truth might thence suffer from the unskilfulness of its advocate."¹ In June, 1742, Hume was delighted, however, with the report from London concerning his *Essays Moral and Political*, published 1741-42, "that Dr. Butler has every where recommended them ; so that I hope they will have some success."² There is little reason to doubt that Butler was able to identify their anonymity with the anonymity of the *Treatise*, even if Hume had failed to furnish him with a copy. For they are equally typical of Hume's verve. Their relatively inoffensive religious character not only recommended them to Butler but also insured them an immediate public reception far surpassing that accorded his first philosophical masterpiece, emasculated in revision though that had been.

The *Treatise of Human Nature*, which early in 1739 "fell dead-born from the press,"³ included Dr. Butler's name in a list of five "late philosophers in England who have begun to put the science of man on a new footing, and have engaged the attention, and excited the curiosity of the public."⁴ This "new footing" was explained in the sub-title to Hume's work as "an attempt to introduce the experimental method of reasoning into moral subjects." The *Treatise* moreover contains a definite concession to Butler's *Analogy* in the admission that, regarding the immortality of the soul, though the metaphysical or *a priori* arguments are "inconclusive," yet "the moral arguments and those derived from the analogy of nature are equally strong and convincing."⁵ This further sample of Hume's castration of the "nobler parts" of the *Treatise* was made unmistakably out of respect for Butler as a man and as a critic. And, to be sure, a following section of the *Treatise* dealing with the formation of habit alludes to Butler as "a late eminent philosopher."⁶ Hume's true opinion regarding the immortality of the soul, however, appears in an essay of that name, unpublished during his life-time, in which he vigorously repudiates even those arguments for "the religious theory" from morality and from analogy, and ironically concludes, as Locke had previously in earnest, that that doctrine

¹ Cf. Alexander F. Tytler, *Life of Kames* (Edinburgh, 1807), I., 87.

² *Letters*, I., 43.

³ "My Own Life," *Philosophical Works*, III., 2.

⁴ *Philosophical Works*, I., 308 and n. The full list reads : "Mr. Locke, my Lord Shaftsbury, Dr. Mandeville, Mr. Hutchinson [Hutcheson], Dr. Butler, etc."

⁵ *Ibid.*, I., 532-533. Cf. *Analogy*, I., i.

⁶ *Ibid.*, II., 202. Cf. *Analogy*, I., v., § 4.

is incapable of rational proof but rests entirely on Revelation.¹ An examination of Hume's other writings confirms the early indication of the *Treatise* that he regarded Butler as the chief representative among English theologians of the experimental method.

In a letter of 1743 to Francis Hutcheson, Hume dared to name and to reject Butler's theological doctrine of conscience expounded in the *Sermons on Human Nature*; furthermore he deplored the apparent influence of that doctrine on Hutcheson.² But in his own *Enquiry Concerning the Principles of Morals* (1751) that same criticism appears only by implication and without specific mention of Butler.³ Even when accepting in his *Enquiry Concerning Human Understanding* (1748) Butler's evidence for the disinterestedness of self-love and benevolence, he does not cite his source but makes indirect reference. In this particular instance Hume is concerned with exalting some late moralists.

And shall we esteem it worthy the labour of a philosopher [he asks] to give us a true system of the planets, and adjust the position and order of those remote bodies; while we affect to overlook those, who, with so much success, delineate the parts of the mind, in which we are so intimately concerned?⁴

A footnote alludes to Butler as representative of the second class, and as having "proved beyond all controversy" the moral point at issue.

Since the publication of the *Treatise* Hume had become more outspoken. In 1747 he was willing to admit privately regarding Hume's advice against printing the *Enquiry* just quoted from: "I think I am too deep engaged to think of a retreat. . . . I see not what bad consequences follow, in the present age, from the character of an infidel; especially if a man's conduct be in other respects irreproachable."⁵ The argument of the essay *Of a Particular Providence and of a Future State*, included in the same *Enquiry*, is directed mainly against Butler's sober and painstaking exploitation of the argument from design with its analogical reasoning from this life to a future existence. Butler had claimed merely the negative design to show,

. . . that the several parts principally objected against in this moral and Christian dispensation, including its scheme, its publication, and the proof which God has afforded us of its truth; that the particular parts

¹ "Of the Immortality of the Soul," *Philosophical Works*, IV., 399-406. Cf. John Locke, *Works* (12th edition, London, 1824), III., 477.

² *Letters*, I., 47.

³ *Philosophical Works*, IV., 253-257.

⁴ *Ibid.*, IV., 10 and n.

⁵ *Letters*, I., 106.

principally objected against in this whole dispensation, are analogous to what is experienced in the constitution and course of Nature, or Providence ; that the chief objections themselves which are alleged against the former, are no other than what may be alleged with like justness against the latter, where they are found in fact to be inconclusive.¹

Yet Butler, as in his argument for a future life, frequently used positive analogy.² The negative aspect, which to the theologian was a *reductio ad absurdum* of Deism, was tacitly accepted as such by the sceptic. Of the positive, which formed the empirical mainstay of Deistic as well as of Christian Naturalism, it was Hume's conclusion that :

All the philosophy, therefore, in the world, and all the religion, which is nothing but a species of philosophy, will never be able to carry us beyond the usual course of experience, or give us measures of conduct and behaviour different from those which are furnished by reflections on common life. No new fact can ever be inferred from the religious hypothesis ; no event foreseen or foretold ; no reward or punishment expected or dreaded beyond what is already known by practice and observation.³

Hume indeed makes no mention of Butler in the essay under consideration, but his intent is none the less plain. It was recognized by Professor James Beattie in 1770 and a century later by Professor T. H. Huxley.⁴ Historically, though the analogical argument had been employed by Bishops Browne and Berkeley, it was presented definitively by Butler, so that after 1736 contemporary references almost exclusively point to the last named. The general argument from design, of which the analogical argument is but one form, had been stated in 1690 by Locke in the quotation from Cicero :

What can be more sillily arrogant and misbecoming, than for a man to think that he has a mind and understanding in him, but yet in all the universe beside there is no such thing ?⁵

¹ *Analogy*, Introduction, § 13.

² *Ibid.*, I., i.

³ *Philosophical Works*, IV., 120-121.

⁴ James Beattie, *Essay on the Nature and Immutability of Truth* (3rd edition, London, 1772), p. 119. T. H. Huxley, *Hume* (in English Men of Letters Series, London, 1879), pp. 152-155. Since Huxley, Butler's connection with the *Essay* seems to have been generally neglected ; his connection with the *Dialogues* has never, I think, been noted. C. W. Hendel in *Studies in the Philosophy of David Hume* (Princeton, 1925) and André Leroy in *La Critique et la Religion chez David Hume* (Paris, 1930) have some pertinent observations to make concerning the general relationship between Butler and Hume.

⁵ *Essay Concerning Human Understanding*, IV., x., § 6, from *De. Leg.*, I., ii.

It is found in one form or other in practically all apologetical literature of the following century ; its more scientific manifestations, first developed by Ray and Derham, received classic treatment in that century by Paley, and culminated in the nineteenth in the *Bridgewater Treatises*. While not ignored by Cleanthes, that type of the design argument is largely passed by for the analogical. And in so doing Cleanthes is following closely the path set by Butler in his *Analogy*.¹

The apparent boldness of the *Enquiry* was short-lived. For the logical attempt of the essay to force Butler to the realization of the basic weakness and even danger of the analogical thesis, Hume was yet desirous to qualify in his latest period as he had been in his earliest. And this concession, however slight or even ironical, seems to have been based ultimately upon his personal respect for Bishop Butler as a thinker. "The greatest name in the Anglican Church" is the tribute paid to Butler a century later by John Henry Newman, and I doubt if Hume would have disputed it.² His own latest tribute to Butler appears in the *Dialogues Concerning Natural Religion*.

In the penultimate paragraph Hume names two "sects" of the human race alone worthy of Divine consideration : the first, "but a very few" who "merit his *favour*," being "the philosophical theists, who entertain, or rather indeed endeavour to entertain, suitable notions of his divine perfections" ; the second, "almost equally rare," being the "philosophical sceptics, . . . who, from a natural diffidence of their own capacity, suspend, or endeavour to suspend all judgment with regard to such sublime and such extraordinary subjects."³ Thus Cleanthes and Philo are brought together as the "philosophical theist" and the "philosophical sceptic." And that Cleanthes is Butler is again indicated in the final paragraph where, following the very outline of the *Analogy*, Hume comments in qualification, in disagreement, or in assent of Butler's various arguments.

The paragraph opens with a qualification :

If the whole of natural theology, as some people seem to maintain [i.e., Butler and his school], resolves itself into one simple, though somewhat

¹ *Dialogues*, p. 177. Cf. also *Philosophical Works*, IV., 112. For evidence that Butler does not entirely neglect the argument to final causes, cf., *Analogy*, I., ii., § 6 ; I., v., § 18 ; I., vi., § 11. Cf. particularly II., Concl., § 1.

² Letter of December 5, 1852, from Newman to Dr. Hawkins, Provost of Oriel College, Oxford. Through the courtesy of the Provost and the Fellows of Oriel I have been able to see the letter.

³ *Dialogues*, p. 281.

ambiguous, at least undefined proposition, *that the cause or causes of order in the universe probably bear some remote analogy to human intelligence* [the positive analogical argument of the *Analogy*]:

Hume now disagrees with Butler :

If this proposition be not capable of extension, variation, or more particular explication [opposing *Analogy*, I., where the argument deals with Natural Religion]: If it afford no inference that affects human life, or can be the source of any action or forbearance [opposing *Analogy*, I., vi., §§ 6, 15 on the practicality of Natural Religion; cf. also II., viii., § 6]: And if the analogy, imperfect as it is, can be carried no farther than to the human intelligence; and cannot be transferred, with any degree of probability, to the other qualities of the mind [opposing *Analogy*, I., iii., on the moral government of God]:

Hume finally agrees with Butler—though ironically :

If this really be the case, what can the most inquisitive, contemplative, and religious man do more than give a plain, philosophical assent to the proposition, as often as it occurs; and believe that the arguments on which it is established exceed the objections which lie against it [confirming *Analogy*, Introduction, § 13, as quoted above]? Some astonishment indeed will naturally arise from the greatness of the object [confirming *Analogy*, I., Conclusion, § 1 and other passages]: Some melancholy from its obscurity [confirming *Analogy*, I., vii., *passim*]: Some contempt of human reason, that it can give no solution more satisfactory with regard to so extraordinary and magnificent a question [confirming *Analogy*, Introduction, § 7; I., vii., § 6, and many other passages where experience is rated higher than reason]. But believe me, Cleanthes, the most natural sentiment, which a well-disposed mind will feel on this occasion, is a longing desire and expectation, that Heaven would be pleased to dissipate, at least alleviate, this profound ignorance, by affording some more particular revelation to mankind, and making discoveries of the nature, attributes, and operations of the divine object of our Faith [confirming *Analogy*, Part II., dealing with Revealed Religion].¹

This final paragraph—according to Professor N. K. Smith, “an addition made in the final revision, in 1776”²—Hume

¹ *Dialogues*, pp. 281-282. The assignment of the above references to the *Analogy* has necessarily been arbitrary, but it is meant suggestively, as many other passages might almost equally well be instanced. Yet there are even other signs of Butler in the *Dialogues* than those already given. I cite here a few out of the many plain parallels between the arguments of Cleanthes and those of Butler: *Dialogues*, p. 169 on evidence and assent—*Analogy*, II., vi., § 11; p. 191 on the eye—*Sermons*, II., § 1; p. 191 on cumulative design—*Analogy*, II., Conclusion, § 1; p. 215 on infancy of world—*Analogy*, II., iv., § 6; p. 229 on benevolent design—*Analogy*, I., ii., § 3; pp. 266-267 on theism and analogy—*Analogy*, I., Introduction, § 13; p. 271 on future state—*Analogy*, I., i.; p. 272 on proper office of religion—*Sermons*, XV., § 16. Still other evidence might be offered from statements of Philo attributed to and uncontradicted by Cleanthes. But I omit them for sake of clarity and of brevity.

² *Dialogues*, p. 281 n.

might have written with the *Analogy* open before him, so closely does he follow its scheme and, at times, suggest its very phraseology. Reiterating the finite or anthropomorphic resultants of the religious doctrine of analogy, Hume's primary object in the *Dialogues* had been to show that Butler's appeal to *probability* becomes in the event an appeal to *possibility*, which is no other than the argument to scepticism.¹ This Humian *reductio ad absurdum* is driven home with the conclusion that "to be a philosophical sceptic is, in a man of letters [*i.e.*, an educated man], the first and most essential step towards being a sound, believing Christian."² The "philosophical theist" is in last analysis but little removed from the "philosophical sceptic," Butler but little removed from Hume himself.

Because of these almost personal references to Butler and to his works, it seems unlikely that Cleanthes is most accurately identifiable with John Locke, as otherwise judiciously urged by Professor Preserved Smith, again reasoning etymologically.³ Cleanthes' argument is substantially the argument from analogy, an argument which was never elaborated by Locke, but which forms the framework of the *Analogy of Religion, Natural and Revealed, to the Constitution and Course of Nature*. To be sure, Hume on his death-bed actually confessed to the ever-prying James Boswell that "he never had entertained any beleif [*sic*] in Religion since he began to read Locke and Clarke."⁴ But his introduction to their writings took place before he could have known Butler's; probably after 1726 and almost certainly after 1736, the empirical theologian to Hume was Butler. It is remarkable that the same early critic of the *Dialogues* who noticed the connection between Demea and Clarke also referred to Butler for "an answer to all the deistical or sceptical speculations that ever were or perhaps ever will be published."⁵ Joseph Milner felt Hume's essential antagonism to Butler though he did not see that Hume expressed the bishop's position—for ulterior

¹ For Butler's doctrine of probability, cf. *Analogy*, Introduction, §§ 1-5.

² *Dialogues*, p. 282.

³ *Op. cit.*, II, 524. In distinction to Professor Smith's effort to interpret the interlocutors by the etymology of their names is what seems to me the much sounder historical explanation of Hume's choice of those names given by Professor John Laird. Philo and Cleanthes are both mentioned in Cicero's *De Natura Deorum*; Demea is the principal character of Terence's *Adelphi* and stands for the orthodox opinion. Cf. *Hume's Philosophy of Human Nature* (London, 1932), pp. 294-295. Cf. also *Dialogues*, p. 77.

⁴ "An Account of my Last Interview with David Hume, Esq." Appendix A in *Dialogues*, p. 97.

⁵ Joseph Milner, *op. cit.*, VIII., 157 n.

motives—in the person of Cleanthes. To return to Professor Smith, if one may be permitted to understand the *theological school of Locke* of which Butler was the most eminent spokesman, then there is no pressing need to question his ascription. For though Bishop Butler cannot be held strictly accountable for every phrase put into the mouth of Philo's antagonist, it ought now to be abundantly evident that he represents the basic positions of that speaker's "accurate philosophical turn."¹ Cleanthes, in the words of Philo, is the exponent of "experimental theism";² Butler, in the words of Hume in the early *Treatise*, is the theologian of "the experimental method of reasoning." And it seems probable that in Hume's mind Cleanthes was Butler.

In so far as art can ever be colligated with reality, then, it is reasonable to believe that the *Dialogues* are susceptible of historical interpretation with respect to their background, in particular that Philo, Cleanthes, and Demea are identifiable as Hume, Butler, and Clarke respectively. There is no need to push the point too far; indeed it might well be reserved for interpretative purposes only. Yet the three speakers take on a deeper significance and a heightened dignity because of their historicity. Hume himself was not only a philosopher who so loved the empirical method as to become sceptical of abstractions, but he was also a professional historian. It is this contact with life that makes the *Dialogues* masterpieces of their kind, that renders them superior, for instance, even to those of Berkeley. Anxious to avoid "that vulgar error . . . of putting nothing but Nonsense into the Mouth of the Adversary,"³ Hume achieved his purpose brilliantly. His characters are not men of straw tilted to be blown down by the slightest puff, but among the finest intellects of the century.

If this rendering of the riddle of the *Dialogues* is in any sense a solution, it may serve to draw attention to one side of Hume's character that too frequently passes unheeded—his timidity. This essential timidity seems of a variety far more deeply ingrained than just the prudential desire not to offend the proprieties or to violate the laws of established society, necessary though such tact must have been in eighteenth-century Scotland. This is not the place to recite the penalties, legal and extra-legal, then attached to radical dissent. But an instance or two may be cited to indicate how the threat of such penalties forced a species of conformity upon all thinkers. The young George

¹ *Dialogues*, p. 159.² *Ibid.*, p. 204.³ *Letters*, I, 154.

Berkeley, it will be recalled, visualizing a career in the Church, had had to warn himself in the privacy of his *Commonplace Book* "To rein in your satirical nature," "To use utmost caution not to give the least handle of offence to the Church or Church-men."¹ Berkeley became Bishop of Cloyne. Hume also tried to rein in his satirical nature, but Hume's position was far more difficult, as he had pushed past nominalism into scepticism. Hume had seen his friend, the pious Francis Hutcheson, prosecuted in 1737 by the Glasgow Presbytery, and three years later was himself exceedingly worried concerning a "Point of Prudence," knowing full well that "the Consequences are very momentous."² His confessed "piece of cowardice" in toning down the *Treatise* before daring to submit it to Butler may be regarded as a specimen of mere prudence. But the same can hardly be said for the unseemly repudiation out of the grave—as it were—of the *Treatise* as "that juvenile work, which the Author never acknowledged."³ The cautious manœuvring to secure *posthumous* publication of the *Dialogues* themselves after preserving the manuscript unpublished during some twenty-five years of his life, is a prime example of the more intimate species of timidity.⁴ Another, and perhaps the most curious, is the early introspective letter to Dr. George Cheyne analysing his own physical and psychological ailments.⁵

Yet Hume's timidity was not in his thinking; far from that, Hume the thinker at times frightened Hume the man. Nor did he fail to recognize this situation. In 1751 he tells of how he had recently

... burned an old Manuscript Book, wrote before I was twenty. . . . It begun with an anxious Search after Arguments, to confirm the common Opinion: Doubts stole in, dissipated, returned, were again dissipated, returned again; and it was a perpetual Struggle of a restless Imagination against Inclination, perhaps against Reason.⁶

Complete suspense of judgment was impossible to maintain; so the Pyrrhonian sceptic of the study became the mitigated sceptic of the salon. When accused of speaking "like a Libertine in

¹ *Berkeley's Commonplace Book* (edited by G. A. Johnston, London, 1930), §§ 643, 727.

² *Letters*, I., 39-40.

³ *Philosophical Works*, III., 38. The remark originally appeared in the advertisement to the posthumous (1777) edition of the *Essays*.

⁴ A lucid history of this affair is given in Appendix C to the *Dialogues*, pp. 110-121.

⁵ *Letters*, I., 12-18. "So unusual a letter," writes Hume himself.

⁶ *Letters*, I., 154.

religion," Hume replied, "be assured I am tolerably reserved on this head."¹ Hume the philosopher was content to be an "infidel"; but Hume the man blandly remarked to Baron d'Holbach and sixteen other *libertins* that he had never seen an atheist.² Hume's timidity as a creature of society and not of the study is best observed, however, in his art as illustrated by the present case of the *Dialogues*.

Ostensibly patterned closely after Cicero's *De Natura Deorum*, the *Dialogues* covertly picture Dr. Samuel Clarke, Rector of St. James's, Westminster, and famous Boyle Lecturer in defence of Natural and Revealed Religion, being roundly castigated by Dr. Joseph Butler, Bishop of Bristol and Dean of St. Paul's, while the infidel Hume, besides contributing substantially to Clarke's discomfort, lays a trap in scepticism for the empirical theologian himself. What keen delight it must have afforded Hume thus to play off one theologian against the other, Clarke whom he contemned, Butler whom he respected—but both divines!³ How little Cleanthes in reality is the "Hero of the Dialogue" is evinced conclusively in the allotment of space to the three speakers: 67 per cent. to Philo, 21 per cent. to Cleanthes, and 12 per cent. to Demea.⁴ The sceptic is twice as important as the two theists put together. Whatever his artistic intent may have been, Hume was fundamentally the sceptic bringing to a close, at least so far as philosophy was concerned, the Age of Reason in England.

Even this truth, basic to any understanding of Hume's place in the history of philosophy, is disguised by the veil of irony and delusion deliberately thrown over the *Dialogues* as a whole.

I wish it were still in my power [wrote Hume in 1764] to be a hypocrite in this particular [of being sincere with "the vulgar" regarding their "superstitions"]. The common duties of society usually require it; and the ecclesiastical profession only adds a little more to an innocent dissimulation, or rather simulation, without which it is impossible to pass through the world.⁵

¹ *Letters*, I., 189.

² The complete story is given in *Dialogues*, p. 48.

³ For a few of Hume's typical and informal thrusts at divines, cf. *Letters*, I., 3, 153, 186, 246, 252, 265-267, 310; II., 92, 244. It is to be observed, however, that after 1769 when he settled in Edinburgh for good, Hume became the intimate friend of several "moderists" among the Scotch clergy.

⁴ These computations are based on the page count given by J. Y. T. Greig in *David Hume* (London, 1931), p. 236 and n.

⁵ *Letters*, I., 439.

It is therefore little wonder Hume could exult over his "innocent dissimulation" in the *Dialogues* "that nothing can be more cautiously and more artfully written." For that is the approbation he renders himself. It is the sanction of the philosopher to the artist. It is also the sanction of the hero to the man of the world. Why Hume never spoke out clearly and distinctly is perhaps sufficiently plain to any student of the sociological conditions of his day. Nor was there anything reprehensible in all his precautions. But exactly what Hume would have said if he had been free to speak out can never be more than surmised by any amount of historical study. Indeed the curious and intimate fusion in Hume of the intellectual hero with the pragmatic man of the world is what properly constitutes the essential paradox and perpetual enigma of his character.

VI.—DISCUSSIONS.

MR. JOSEPH AND THE *REPUBLIC*.

I VENTURE to make some answer to a criticism published by Mr. H. W. B. Joseph (*Essays in Ancient and Modern Philosophy*, pp. 114-121) of the account of the philosophy of the *Republic* contained in my book *The Political Philosophies of Plato and Hegel*.

Mr. Joseph attributes to me the opinion that "Plato thought" that the souls of men differ so radically from one another that a member of any one of the three classes possesses only a single element of the three into which Plato divides the soul; and he sets himself to refute this opinion by citing fifteen passages from the *Republic*, besides others from elsewhere, in which it is asserted or implied that every man, to whatever class he belongs, possesses a soul composed of all three elements.

Mr. Joseph adds that other similar passages could be adduced; but he might have spared himself the trouble of collecting so many. All that these passages prove could be proved equally well by adducing the single fact, which I could certainly not deny, that Plato attributes to all the members of his state alike the capacity of realizing the virtue of justice in their souls. Since justice consists in the proper relation of the three elements of the soul, it is evidently implied that every soul possesses these three elements.

In my book I elicited from Plato's political doctrines (especially from those upon which his theory of the three classes is founded) certain consequences quite incompatible with this attribution to all men alike of an identical constitution of the soul. Mr. Joseph ignores my arguments; he thinks my conclusions sufficiently refuted by the production of evidence to show that Plato in many passages professed the doctrine of the identical constitution of all men's souls. But this would constitute a refutation only if the assumption were granted that Plato *could not* have held a political theory of which the implications were inconsistent with his doctrine of the soul. Mr. Joseph makes that assumption, but I deny it. I admit that Plato holds the psychological doctrines of which Mr. Joseph has produced illustrations; it remains none the less true that he holds political doctrines of which the implications are incompatible with these.

I must admit that this position was not stated in my book. If it had been, I should have been proof against Mr. Joseph's criticisms; indeed I suppose that I should not then have provoked them. I

did not avoid the error (the exact converse of that which I think Mr. Joseph commits) of forcing Plato's psychological teaching too much into conformity with his political doctrine. I do not admit that I was wrong in the consequences concerning the nature of the soul which I deduced from the latter, but it was not therefore justifiable to attribute them to Plato as though they had been doctrines which he in fact professed, and it was certainly wrong to suggest that Plato did not also hold other doctrines incompatible with them. To whatever extent I did this, I acknowledge myself to have been in error.¹ But Mr. Joseph does not cite his passages with the object of proving that there is another side to Plato besides that upon which I laid stress; he cites them as evidence to prove that my conclusions were incorrectly drawn. To this I can only reply that his evidence proves no such thing.

The real point at issue between Mr. Joseph and myself is to be found not in his criticism of my book, but in Chapter IV. of his own; and this issue seems to me of sufficient importance to be worth arguing at length. Mr. Joseph works upon the principle, which I have denied, that the main Platonic doctrines must be interpreted into consistency with one another. Plato admits (what, as Mr. Joseph justly remarks, it would be hard for anyone to deny) that all men alike possess all three parts of the soul; he admits further that all men are capable of ruling the irrational parts of their souls by means of the rational element in them (inasmuch as he asserts all men to be capable of Justice, and as no man can be Just in whose soul reason does not occupy a position of superiority over the other two parts). Mr. Joseph starts from these admissions and sets himself to interpret Plato's political doctrines in a way which shall involve no inconsistency with them. The result is an improvement on Plato, but it is not Plato.

To possess the faculty of Reason in the soul is to be capable of Wisdom, to possess the Spirited Element is to be capable of Courage (*Andreia*). If all men's souls contain these elements, all are capable of these virtues. On the other hand, these virtues are what qualify a man to be a ruler; furthermore, they are the sole qualifications which the ruler requires. And yet Plato's division of the state into classes implies that not all men are qualified to rule. The problem therefore before Mr. Joseph is to show how this doctrine of classes is to be reconciled with the former doctrine, according to which all men are capable of the virtues which qualify men to rule.

His solution is as follows. He points out that every act which any man performs in a civic capacity has to be wrought into harmony with two contexts; first into that of the public life of the city, secondly, into that of the private life of the man. Mr. Joseph

¹ I should like to make two other acknowledgements to Mr. Joseph. He is right in supposing (p. 117) that I confused *μωθωτική τέχνη* with *χρηματιστική*; and he has enabled me to purge of at least one blunder an article on the *Republic* which is published elsewhere.

illustrates this by the analogy of an organization such as the Salvation Army. The work which any given member does to further the cause of the Army has to be co-ordinated, first with the activities of his fellow-workers in the same cause, secondly with the avocations other than his work for the Army, which together with it constitute his individual life. Each of these two tasks requires the same two qualities for its performance: Wisdom and Courage. Wisdom is necessary both to conceive the proper plan upon which a given citizen's work is to be harmonized with the work contributed by his fellow-citizens into the total of organized activity which constitutes the life of the state; it is necessary also in order to conceive the proper plan upon which the same citizen's work is to be harmonized with the private avocations of his life as an individual. Courage, or Resolution, is necessary in each case alike to carry through the plan against the resistance of inertia or contrary inclination. We may perhaps distinguish the exercises of these virtues by the names 'political' and 'moral' respectively, according as their task is to co-ordinate an individual's work on the one hand with the work of other individuals in the public life of the state, or on the other hand with domestic and other avocations in the life of the individual himself.

This distinction provides Mr. Joseph with the solution to his problem. The moral exercise of Wisdom and Courage he supposes Plato to attribute to every man; what is specialized in certain classes is only the political exercise of these virtues. Thus a member of the Third Class who performs an economic function in the state, surrenders to the Ruler's wisdom the task of adjusting his contribution to the end of the state, but must rely upon his own wisdom for the adjustment of it to the end of his own life. The ruler himself has a double task to perform; he has both to plan the policy of the state and to adjust his public work to the scheme of his own life. To the obvious objection that Plato undeniably thinks wisdom to be the same virtue whether it is exercised morally or politically, and that, therefore, he could have no ground, if he attributes moral wisdom to all, for confining political wisdom to a few, Mr. Joseph's answer is that the classes differ in the degree of their wisdom (see p. 103). Thus the member of the Third Class must be held to have enough for the direction of his private life, the member of the First Class has enough for that, and a surplus in addition which he can devote to directing the life of the state. I think Mr. Joseph would appeal in support of this interpretation to *Republic*, IX., 590, where it is said to be characteristic of the member of the Third Class not that he has no faculty of reason, but that he has it 'weak by nature'.

This is not to interpret Plato, it is to re-write him. Plato says that the same weakness of reason which disqualifies a man from controlling the state, disqualifies him at the same time from controlling his private life. "We say that he ought to be a slave of that best kind of man who has the divine principle of reason dominant in himself" (590c.). Whatever precisely Plato means by "slave" in this

passage, it is certain that he excludes moral self-determination from the person thus designated.

But it is not necessary to rely on the citation of single passages. More general considerations make it impossible to suppose that Plato ever contemplated that distinction between the political and the moral exercise of virtue upon which Mr. Joseph's interpretation is based. Thus, Wisdom and Courage are for Plato the product of education, and the *Republic* gives a full account of the training by which they are to be produced. But this training is introduced, and referred to throughout, as the training of Guardians. It is to do for the Ruler what his apprenticeship does for the cobbler: namely, to teach him to perform his special job. If Wisdom and Courage are products of the Guardians' education, how is one who is not a Guardian to acquire them? And without them, how is he to assume the direction of his private life? If he is to attribute to each member of the Third Class the Wisdom and Courage necessary for the ordering of his own life, Mr. Joseph must suppose the members of the Third Class to share the Guardians' education. This is a very difficult supposition to make. Guardianship is deliberately introduced by Plato as a trade, which a man must pursue to the exclusion of other trades. The corollary of this is that the training for this trade shall be confined to those whose function it is to pursue it, and that for a cobbler, say, to learn this trade as well as his own would be an infringement of justice (*πολυπραγμοσύνη*). The Guardian who should undergo an apprenticeship, say in cobbling, would be guilty of the fault of acquiring two crafts; so then, likewise, would the cobbler who should undergo a training in Guardianship.

An inspection of the curriculum of the Guardians' education will reveal a further difficulty. It is designed for a man who is to be at leisure from economic pursuits during all the hours of his day, and all the years of his life. It is not compatible with the avocations of a man who has to pursue a mechanical art to earn his daily bread.

But let us suppose these difficulties surmounted; let us grant, for the sake of argument, that the Demiurges can be held to share in the Guardians' education and so to acquire the virtues of Wisdom and Courage by which to govern their private lives; we are faced with a further difficulty. The question arises: what now disqualifies them from participation in government? It is impossible to answer that they have proceeded to such a stage in the educational programme that they are capable of the private exercise of Wisdom and Courage, but not to a certain higher stage which would qualify them for the public exercise of these virtues, because Plato's educational programme is not divided upon this principle. On the contrary, the earlier or elementary stage of Plato's education culminates in the attainment of Courage; the second stage is devoted to the cultivation of Wisdom. A man, therefore, who has reached the first stage will be capable of the political, not only of the moral, exercise of Courage; he will be excluded from the moral, as well as from the

political exercise of Wisdom. There is no stage at which he will be equipped to exercise either virtue privately but not publicly.

There is another obstacle in the way of attributing Mr. Joseph's theory to Plato. If each subject of the state is to have scope for the exercise of individual judgement in the ordering of his private life, there must be a limit set to the extent to which it is right for government to direct his conduct. But Plato sets no such limit to the ruler's authority. There is no sphere of the subject's life so intimate that he cannot undertake the direction of it. He is to mould the subject's very soul.

If it is objected that this heteronomy of the subject lasts only during his period of education; that Plato looks forward to a term in the educational process when, the end having been achieved of setting up the right "constitution" in the soul of the pupil, he shall be "set free" from this pupillage (IX., 590e); and that therefore such an adult and emancipated pupil may fairly be held to assume henceforth the direction of his own life: if this is objected, the answer is easy. Such a man is qualified to direct his own life, but he is qualified also to direct the city's. The term of his pupillar status coincides with the term of his subject status, and he is "set free" only in the moment when he is qualified to become a ruler. There is no period during which he is both free from pedagogy and subject to rule, and therefore none during which he can be held capable of the moral without the political exercise of Wisdom and Courage.

M. B. FOSTER.

VII.—CRITICAL NOTICES.

Language, Truth and Logic. By ALFRED J. AYER. London : Victor Gollancz, Ltd., 1936. Pp. 254. 9s.

THE title of this book may be taken as indicating the nature of Mr. Ayer's treatment of philosophical problems. His views are, he claims, the logical outcome of the empiricism of Berkeley and Hume, and have been derived more directly from the doctrines of Bertrand Russell and Wittgenstein. It is not improbable that neither of these philosophers would accept Mr. Ayer's main conclusions. The philosophers with whom he is in the closest agreement are the members of the Viennese Circle; he professes to owe most to Prof. Rudolf Carnap. Certainly anyone who is at all interested in this important contemporary movement will welcome this book. It is the first clear and full presentation by an English writer of the doctrines which unite the various members of the Viennese Circle and the Berlin Group. This statement must not be taken to suggest that Mr. Ayer has been expounding other people's views; on the contrary, he is concerned with stating views so thoroughly his own, so natural to his mode of thinking, that he cannot realize the possibility that any competent philosopher might differ from him. The first two sentences of Chapter I reveal his attitude: 'The traditional disputes of philosophers are, for the most part, as unwarranted as they are unfruitful. The surest way to end them is to establish beyond question what should be the purpose and method of a philosophical enquiry.' His confidence in the power of his method is so great that he does not hesitate to provide 'a definitive solution of the problems which have been the chief sources of controversy between philosophers in the past'. The main part of the book is taken up with establishing 'beyond question' what the proper method of philosophical enquiry is. This done, we find Mr. Ayer saying in his last chapter—entitled 'Solutions of Outstanding Philosophical Disputes'—'we who are interested in the condition of philosophy can no longer acquiesce in the existence of party divisions among philosophers. For we know that if the questions about which the parties contend are logical in character, they can be definitively answered. And, if they are not logical, they must either be dismissed as metaphysical, or made the subject of an empirical enquiry.' The stating of such views gives to his pronouncements an unfortunate appearance of dogmatism—an appearance which is rendered more obvious by the too great brevity of his writing. It is unfortunate

because Mr. Ayer is not a dogmatist. For a dogmatist is one who accepts unquestioningly his own beliefs as true simply because they are *his* beliefs; he sees no need for reasons in support of them. Mr. Ayer, however, is confident of his 'definitive solutions' because he has adopted a method which, if valid, would enable him to separate the wheat from the chaff in philosophical controversies.

This short way with dissentients is to be found in a thorough-going acceptance of Hume's well-known division of genuine propositions into two classes and in reliance upon a weakened form of the principle of verifiability to provide a means of eliminating spurious propositions. Mr. Ayer divides sentences which are regarded as expressing propositions into those which genuinely express propositions and those which do not. In the latter class are to be found all metaphysical sentences: in the former are comprised *a priori* propositions and empirical propositions (corresponding respectively to Hume's 'relations of ideas' and 'matters of fact'). The genuineness of apparent statements of fact is to be tested by the criterion of verifiability. Mr. Ayer says that 'a sentence is factually significant to any given person, if, and only if, he knows how to verify the proposition which it purports to express—that is, if he knows what observations would lead him, under certain conditions, to accept the proposition as being true, or reject it as being false' (p. 20). We must distinguish between verifiability in principle and practical verifiability. A proposition is in principle verifiable by me if I know what observations would decide it even if I am unable in fact to put myself in the situation in which the relevant observations could be made; it is verifiable in practice if I can place myself in the required situation. This distinction has been made familiar by the writings of Prof. Schlick, Prof. Carnap and others of their group. Mr. Ayer now introduces another distinction, namely 'between the "strong" and the "weak" sense of the term "verifiable"'. In the strong sense, verifiability requires that the truth of the proposition could be conclusively established in experience; in the weak sense, a proposition is verifiable, 'if it is possible for experience to render it probable'. Mr. Ayer rejects conclusive verifiability as the criterion of significance, since he sees that to adopt it is to treat general propositions of law (*e.g.*, 'arsenic is poisonous') as nonsensical. He also rejects Dr. Popper's suggestion that all that is required in order that a sentence should be factually significant is that it is definitely confutable by experience. For, he argues, an 'hypothesis cannot be conclusively confuted any more than it can be conclusively verified' (p. 25). Accordingly, he accepts the weak form of the principle of verifiability as the criterion of significance. It is enough to ask—concerning a putative proposition—'Would any observations be relevant to the determination of its truth or falsity?' Only if the answer to this question is in the negative is the statement under consideration to be regarded as nonsensical. As thus stated the principle would seem to be essential

to any form of empiricism,¹ but a good deal depends upon what meaning is attached to "observations".

Mr. Ayer attempts to make his position clear by formulating it as follows: 'Let us call a proposition which records an actual or possible observation an experiential proposition. Then we may say that it is the mark of a genuine factual proposition, not that it should be equivalent to an experiential proposition, or any finite number of experiential propositions, but simply that some experiential propositions can be deduced from it in conjunction with certain other premisses without being deducible from those other premisses alone' (p. 26). I am not clear what meaning Mr. Ayer attaches to "records" in the above statement. To this point I shall return later. Meanwhile, Mr. Ayer's contention can be put in another way, as he himself puts it. All factual propositions are empirical hypotheses; the function of an empirical hypothesis is to provide a rule for the anticipation of experience; thus 'a statement which is not relevant to any experience is not an empirical hypothesis, and accordingly has no factual content'. Since Mr. Ayer claims that *a priori* propositions are all tautologies, he says that we may 'define a metaphysical sentence as a sentence which purports to be a genuine proposition, but does, in fact, express neither a tautology nor an empirical hypothesis' (p. 31). As every significant proposition is either a tautology or an empirical hypothesis, he concludes that all metaphysical assertions are nonsensical. He rejects, correctly in my opinion, the view that a metaphysician is a sort of poet. Metaphysics arises either 'from a failure to understand the workings of our language' or from an attempt 'to express the inexpressible'. But Mr. Ayer does not think that most of the great philosophers have been metaphysicians, although they have all made some metaphysical statements. In distinguishing philosophy from metaphysics, Mr. Ayer recognizes the ambiguity of the word "metaphysics", and he uses it (and its derivatives) strictly in the sense in which he has defined it.

The function of philosophy is said to be wholly critical, not, however, in Kant's sense of that term; the philosopher is engaged in an activity of philosophizing; he is concerned 'with the way in which we speak about things' (p. 61); his function is 'to elicit the consequences of our linguistic usages' (p. 209). This function is achieved by philosophical analysis, which issues in definitions. Definitions may be *explicit* definitions or definitions *in use*. The former are of the nature of dictionary definitions. A symbol is defined *explicitly* by putting forward another symbol or symbolic expression which is synonymous with it. Mr. Ayer says that 'the

¹ Prof. G. E. Moore, some years ago, suggested that empiricism might be taken to be defined by the statement: 'That we can know nothing but what could be experienced, i.e., what is of the same kind as what we experience' (*Proc. Arist. Soc.*, N.S. III., 1903, p. 3). It would be an advantage if one of the Logical Positivists would point out the grounds on which they would reject this statement as inadequate.

word "synonymous" is here used in such a way that two symbols belonging to the same language can be said to be synonymous if, and only if, the simple substitution of one symbol for the other, in any sentence in which either can significantly occur, always yields a new sentence which is equivalent to the old' (p. 66). The stress here must be upon *simple* substitution, for the definition of a symbol *in use* is said to consist in showing 'how the sentences in which it significantly occurs can be translated into equivalent sentences, which contain neither the *definiendum* itself, nor any of its synonyms'. But certainly a *translation* can always be substituted for the *translated expression* in accordance with the conditions of equivalence between sentences. It is to be regretted that Mr. Ayer has not made this point clearer. An examination of his examples, however, should suffice to show that the important difference between the two kinds of definition is that in the case of the former the *definiens* can be simply substituted for the *definiendum*, whereas, in the case of the latter, substitution of the *translation* for the *translated expression* involves alteration of the whole of the original sentence.¹ Mr. Ayer points out that defining *per genus et differentiam* yields explicit definitions. Russell's theory of definite descriptions is cited as an example of definition in use. This is not a 'theory' at all in the ordinary sense, but 'an indication of the way in which all phrases of the form "the so-and-so" are to be defined' (p. 68).² Mr. Ayer gives as another example his own definition in use of "material thing". Unfortunately his definition (or, as he says, 'this outline of a definition') is too long to quote. It must suffice to say that it follows the lines of those who say that material things are logical constructions out of sense-contents (to use Mr. Ayer's term). His account of logical constructions is regrettably brief. Indeed, what he has to say is said so shortly that I do not think that anyone who was unfamiliar with the notion of logical constructions would be likely to follow what is said. Even those of us who have some acquaintance with what has been written on the subject may not find Mr. Ayer's account very intelligible. It does nothing whatever to clear up the difficulties which many of us (including myself) find in understanding what exactly is being said when it is said that the table is a logical construction, or that the English State is a logical construction. Moreover, one statement which he makes is,

¹ See J. Wisdom, 'Logical Constructions', *MIND*, vol. xl., pp. 189 *seq.*

² In the translation which Mr. Ayer gives of "The Author of Waverley was Scotch", he makes a very common mistake. He says that the expression is equivalent to "One person, and one person only, wrote *Waverley*, and that person was Scotch". But if "that" is used referentially, then "that person was Scotch" is equivalent to the whole of the original; if "that" is used demonstratively, then Mr. Ayer's expression is not a translation of the original. In the first edition of my *Modern Introduction to Logic*, I made a similar mistake, which was pointed out to me by Prof. G. E. Moore. I find that several other people have made this mistake, so that it is important to guard against it.

I think, definitely misleading. He says: 'And, in general, we may explain the nature of logical constructions by saying that the introduction of symbols which denote logical constructions is a device which enables us to state complicated propositions about the elements of these constructions in a relatively simple form' (p. 73). Surely a logical construction is not *denoted* by a symbol? The introduction of *denoting* seems to me to obscure still further an 'explanation' which is already sufficiently obscure. Further, Mr. Ayer is content, in the course of his elucidatory remarks, simply to put "constructs" and "construction" in inverted commas without showing why this procedure is both necessary and unsatisfactory. I suggest that it is necessary since we all recognize that "constructs" is being used in an unusual sense; and I think it is unsatisfactory without some clear indication as to what this unusual sense is. I think it is possible that Mr. Ayer could provide some further elucidation, and it is in the hope that he may be induced to do so that I have commented upon this topic at such length. To me it seems that the time has come when we ought to require philosophers who use the language of "logical constructions" to make clear quite precisely what this language means.

It is the more incumbent upon Mr. Ayer to give us such an elucidation since he insists that the philosopher is concerned to give definitions in use, and that such a process of defining leads us to say that, *e.g.*, the table is a logical construction. He says that these definitions do not increase our knowledge but do increase our understanding by revealing logical complexities. To reveal such logical complexities is to solve the problems with which the philosopher is concerned. Thus Mr. Ayer's 'solution' of the problem of perception consists in answering the question, 'What is the nature of a material thing?' by giving a definition in use, and by 'giving an actual rule for translating sentences about a material thing' in accordance with the definition. Philosophical statements are all linguistic statements to the effect that certain symbols are definable in use in such and such a way. Every factual statement falls within the domain of one of the special sciences. Hence, philosophy is not concerned with how certain symbols are actually used; if it were, the propositions of philosophy would be factual propositions, and they are not. Accordingly, 'in specifying the language to which he intends his definitions to apply, the philosopher is simply describing the conventions from which his definitions are deduced; and the validity of the definitions depends solely on their compatibility with these conventions' (p. 87). The part here assigned to convention is fundamental to Mr. Ayer's point of view. To me it seems to involve enormous difficulties, but that may be due to a failure on my part to understand.

According to Mr. Ayer every significant, non-factual proposition is analytic; every factual proposition is synthetic. Mr. Ayer's definitions are as follows: 'a proposition is analytic when its validity

depends solely on the definitions of the symbols it contains, and synthetic when its validity is determined by the facts of experience' (p. 103). Thus, whether a given sentence expresses an analytic proposition, or not, depends upon the conventions of the language to which the sentence belongs. One of Mr. Ayer's examples is, 'Nothing can be coloured in different ways at the same time with respect to the same part of itself' (p. 104). If I say this, Mr. Ayer asserts, 'I am expressing an analytic proposition, which records our determination to call a colour expanse which differs in quality from a neighbouring colour expanse a different part of a given thing. In other words, I am simply calling attention to the implications of a certain linguistic usage'. That analytic propositions 'cannot be confuted in experience' but are 'necessary and certain' is thus accounted for on the ground that they 'simply record our determination to use words in a certain fashion. We cannot deny them without infringing the conventions which are presupposed by our very denial, and so falling into contradiction' (p. 114). He adds, 'As Wittgenstein puts it, our justification for holding that the world could not conceivably disobey the laws of logic is simply that we could not say of an unlogical world how it would look'. Mr. Ayer does not elucidate this cryptic statement. But in view of the part assigned by Mr. Ayer to convention, it is important to ask what is meant by "could not" in the sentence 'we could not say of an unlogical world how it would look'. Presumably, 'could not so long as we retain our conventions'. If so, then, given a change in the conventions, it could be said (though not by anyone retaining *our* conventions) how an unlogical world would look (only it would not *look* unlogical to those using the other conventions). Nothing but convenience or habit leads us to retain these conventions. Mr. Ayer definitely asserts that 'the principles of logic and mathematics are true universally simply because we never allow them to be anything else. And the reason for this is that we cannot abandon them without contradicting ourselves, without sinning against the rules which govern our use of language, and so making our utterances self-stultifying' (p. 100). Truly, on this view, it is *ourselves* which we contradict.

I must confess that I find it very difficult to see how the principles of logic can be wholly an affair of convention, and consist wholly of definitions. I can understand how the primitive propositions and concepts of a logical system can be wholly prescribed by convention. It would be possible, given a sufficient body of doctrine, to conventionalize any branch of science. But such a procedure depends upon the adoption of explicit conventions. In founding the principles of logic, it is not maintained that there are any explicit conventions. I assume that we are being given some kind of enlightenment when we are told that the principles of logic are linguistic conventions which we never *allow* to be violated. But the notion of a *convention* which in no sense involves any element of deliberate

adoption does not seem to me to offer any help in explaining what we mean by "cannot", when we say, for instance, ' p and *not*- p cannot both be true'. There is not space to pursue this topic further, although I should like to do so. I must, however, point out that Mr. Ayer disposes of 'the problem of truth' in a summary manner, after the fashion of F. P. Ramsey. Thus he says, 'to say that a proposition is true is just to assert it, and to say that it is false is just to assert its contradictory. And this indicates that the terms "true" and "false" connote nothing, but function in the sentence simply as marks of assertion and denial' (p. 122). This does not seem to me to be satisfactory without some further account of *assertion*, and of the way in which the assertion of propositions is conditioned by conventions. In so far as Mr. Ayer admits that there are any questions to be asked about truth, they are found to be of the form, 'what makes a proposition true or false?' This, he holds, is a loose way of asking how propositions are validated. This question is to be answered by assigning the criteria of validity. In the case of an analytic proposition the criterion is 'that its validity should follow simply from the definition of the terms contained in it' (p. 109). The criterion is purely formal. The validity of a logical proposition does not depend upon its being incorporated in some system; it is valid in its own right, and in principle 'every analytic proposition could be seen to be analytic in virtue of its form alone'.

An empirical, i.e., synthetic, proposition is false if it fails to satisfy some material criterion. Mr. Ayer rejects the view that there is a special class of propositions whose validity consists in the fact that they directly record an immediate experience. He thinks that there are no such propositions at all. Certainly it must be granted that there is no synthetic proposition whose validity follows from its form alone, for this is the mark of an analytic proposition. The question, however, is whether there is any proposition which is incorrigible. Mr. Ayer denies that there is. But it seems to me that if I am looking at a patch which is not a borderline case of colour but is such that I should use "red" correctly if I were to say that 'This is red'; then, in the given case, I can say 'This is red' and it would be absurd to say 'I doubt whether what I am seeing is red'. I think that I should then also be using the word 'This' correctly, and that 'This is red' would be incorrigible. Mr. Ayer would reply that I am here making the gross mistake of identifying the sensation with the proposition. I cannot, however, see that I am. Moreover, unless there are some propositions that are incorrigible, and thus do not require to be validated, then it is difficult to see how an empirical view of science can be maintained. I think Mr. Ayer is bound to accept Carnap's principle of tolerance, and thus to make science itself wholly conventional. Mr. Ayer says that 'a proposition whose validity we are resolved to maintain in the face of any experience is not an hypothesis at all, but a definition. In other words,

it is not a synthetic but an analytic proposition' (p. 135). This remark is made in connexion with hypotheses. But on Mr. Ayer's view, every empirical proposition is an hypothesis. I think, however, that the proposition 'What I am now seeing is red' is not an hypothesis, and there is no question of 'resolving to maintain it in the face of any experience whatever'. This is merely to repeat the point in dispute, but I do think that Mr. Ayer should show how he can hold that science has an empirical basis.

The function of an hypothesis (*i.e.*, a general proposition) is to anticipate experience; we test the validity of the hypothesis by seeing if it fulfils that function. The test can never be carried to completion, so that we can never say that the proposition has been absolutely validated. All that can be done is to increase its probability. Mr. Ayer maintains that it does not follow from the fact that the validity of a proposition cannot be logically guaranteed, 'that it is irrational for us to believe it' (p. 91). With this I should agree, but I think that a great deal more needs to be said about 'rationality'. Mr. Ayer is content to define the rationality of a belief 'by reference to part of our own actual practice' (p. 146), and he says that "being rational" entails being guided in a particular fashion by past experience' (p. 48). Thus to say that an observation increases the probability of a proposition is to say that it increases our confidence in the proposition, as measured by our willingness to rely on it in practice as a forecast of our sensations, and to retain it in preference to other hypotheses in face of an unfavourable experience, provided that we are behaving rationally (see pp. 144, 145). But 'the one thing that we may not do' is to maintain incompatible hypotheses. I cannot discover that Mr. Ayer makes any attempt to analyse the expression 'incompatible hypotheses'. He speaks of the necessity that our hypotheses should be 'self-consistent'. Is self-consistency formal? If so, is it wholly settled by definitions? If not, how does the self-consistency of hypotheses differ from the self-consistency of logical propositions? It is again the question *how* extensive is the rôle of convention in scientific procedure.

A priori propositions, it has been pointed out, are analytic; analytic propositions are tautologies. These do not give us any information about matters of fact. This is obvious, as well as indisputable, since such propositions are not *about* matters of fact at all. Their usefulness consists in revealing concealed complexities; in enabling us, if we were to set forth all the information we possessed with regard to matters of fact, to include propositions which we should otherwise have overlooked. Finally, these tautologies help us to make sure of the consistency of the synthetic propositions included in the list of informatory propositions. They achieve this function by reminding us of the rules which 'govern' our usage of such words as "all", "or", and "not". It is to be regretted that Mr. Ayer has not explained more fully what we are to understand by "rules" in this context, and what precisely is the significance of "governs". Is the usage of "govern" the same when he speaks

of hypotheses as 'rules which govern our expectation of future experience' (p. 139), as when he speaks of 'the convention which governs our usage of the words "if" and "all"'? (p. 105). Again, I find a difficulty in understanding Mr. Ayer's usage of the word "record". Analytic propositions are said to record our determination to use words in certain fashions; an experiential proposition is said to be one which records an actual or possible observation. I do not see how the word "record" can be used in the same sense in both these contexts, and I do not find it possible to determine how exactly it is being used in either.

Mr. Ayer's own philosophical position is that of an extreme phenomenism. He says, 'In the case of the problem of perception, we found that in order to avoid metaphysics we were obliged to adopt a phenomenalist standpoint, and we shall find that the same treatment must be accorded to the other problems to which we have just referred' (p. 185). These are the traditional 'problems' of Rationalism *versus* Empiricism, Realism *versus* Idealism, Monism *versus* Pluralism, the 'solutions' of which Mr. Ayer offers in his last chapter. I have no space to discuss his solutions here, but must content myself with saying that his discussion certainly clarifies considerably the points in dispute. This is especially the case with his discussion of internal relations, although he hardly does justice to the reasons which have led philosophers to hold that all relations are internal. I should like, however, to comment upon Mr. Ayer's discussion of 'The Self and the Common World' (Chapter VII.). His view of the self is largely that of Hume; indeed he regards himself as having filled up the gaps in Hume's theory, and as having solved Hume's problem concerning the unifying principle of the self, by defining personal identity in terms of bodily identity, and bodily identity in terms of the resemblance and continuity of sense-contents. He asserts that the view that all synthetic propositions refer to sense-contents, combined with the view that no sense-content can belong to the sense-history of more than one person, does not entail any form of solipsism. On the contrary, it can consistently be maintained that we have reason to believe in the existence of other persons and that they can have experiences qualitatively similar to our own. 'For', says Mr. Ayer, 'we define the qualitative identity and difference of two people's sense-experiences in terms of the similarity and dissimilarity of their reactions to empirical tests' (p. 206). But I do not think this meets the difficulty. For it seems to me, that, on Mr. Ayer's view, if I say I am observing another person's reactions to empirical tests, yet it is only my own reactions that I am observing. The point cannot be settled by definition. I can, of course, distinguish a group of my own possible and actual observations and define the group as 'another person'. But this is not what I mean when I assert that other people exist. Nevertheless, this is all that Mr. Ayer's view allows.

Mr. Ayer makes short work of Ethics and Theology. He sees that the acceptance of an 'absolutist' theory of ethics would under-

mine the whole of his main argument, which is based upon the principle that a synthetic proposition is significant only if it is empirically verifiable. He rejects the alternatives offered by 'naturalistic' theories on the ground that they all offend against the conventions of our language. He adopts a radically subjectivist view, holding that 'ethical statements are expressions and excitants of feeling which do not necessarily involve any assertions' (p. 163). He distinguishes between 'normative' and 'descriptive' ethical symbols. If the symbol "wrong" is used to express a moral judgement, it is normative; if it is used to state that a certain type of conduct is repugnant to the moral sense of a particular society, it is descriptive. In the latter case the statement is an empirical one and belongs to the domain of sociology; in the former case the sentence in which "wrong" occurs expresses a moral sentiment and not an empirical proposition at all. In this way Mr. Ayer thinks that his theory escapes the objection, commonly urged against the ordinary subjectivist theory, namely, 'that the validity of ethical judgements is not determined by the nature of their author's feelings' (p. 163). For his theory 'does not imply that the existence of any feelings is a necessary and sufficient condition of the validity of an ethical judgement. It implies, on the contrary, that ethical judgements have no validity.' He admits that, on his theory, it would be impossible to argue about questions of value. But he meets the point of this objection by denying that we ever do argue about a question of value; when we seem to be doing so, we are really arguing about a question of fact. I am not convinced that Mr. Ayer has established this contention.

It is easy to see that Mr. Ayer will not need to waste time over questions of theology. Any assertion which involves the word "God" is a metaphysical assertion, and has thus been ruled out *ab initio*. He offers to the theist 'the same comfort' as to the moralist, namely, 'His assertions cannot possibly be valid, but they cannot be invalid either' (p. 175). The plain man would not find it easy to see the difference between Mr. Ayer's non-atheism and the fool's atheism.

Far too much of this review has been taken up with expressing dissent from Mr. Ayer's views. I am in the main in agreement with his method, or perhaps I should not be correct in saying more than that I am in sympathy with his revolt against deductive metaphysics and the search for a basis of certainty. But I have not been convinced that all philosophical problems are linguistic, nor that all the traditional problems can be so easily solved as Mr. Ayer supposes. At the moment, I think, the request to be made of the logical positivists is that they should submit the symbol "convention" to syntactical analysis. Mr. Ayer explicitly excludes from his book any discussion of "meaning". It is to be hoped that he will proceed to tackle this problem in his next book.

The book is very well printed; there is an excellent analytical table of contents and a very full index.

L. SUSAN STEBBING.

Grundzüge der Ethik. By BRUNO BAUCH. Stuttgart: W. Kohlhammer, 1935. Pp. viii., 327. M. 13.50.

IN this work the author's object is to discuss the fundamental principles of ethics, which is itself regarded as the fundamental part of practical philosophy. In the Introduction he explains his view of the scope of ethics. Although ethics is concerned especially with morality and moral values, it is not exclusively concerned with them; in its wider conception as practical philosophy, it is concerned with human activity and human values generally, and it has to discuss the relation of moral values to the other values and to the value of human life as a whole. The first chapter deals briefly with the relation of moral value to life and the meaning of life. The main points are, first, that moral value must have a significance that is universal or independent of the individual, and yet, on the other hand, must be realised in a concrete or individual way, and, second, that life can gain meaning only in so far as it is capable of realising values in its various activities. Value and actuality, life and its meaning, are at once necessarily distinguished from each other and necessarily connected with each other.

Chap. ii. is entitled 'Phenomenology of the Moral Consciousness'. What is that characteristic of the moral consciousness which distinguishes it from a consciousness that is not yet moral? According to the author it is the consciousness of responsibility. That he should emphasize the seriousness and urgency of the moral agent's responsibility was only to be expected, but he dilates upon its terrors in a way that seems to me to tend towards exaggeration and unreality. Every moment of our waking life has its responsibility; at each moment we are doing something or leaving something undone; every thought, every word, is also a deed, and once a deed has been done, it has become involved in the infinite connexion of events and has consequences that are no longer under our control. The good or evil thoughts of the moment may colour our mood for a much longer time. The way we deal with another person at the moment may make or lose for us a friend for life. A harsh word, nay, even the unspoken word, may plunge another into misery and despair. Even a choice that might seem quite indifferent, say, that between two equally good roads to the same place, may turn out to make a very great difference, since an important encounter may depend upon it. Now, although in this last example the author is only trying to show that no act is really indifferent, since every act has consequences and may have important consequences, yet the example is plainly out of place and misleading. For at the moment of choice the alternatives *were* indifferent, and the fact that the choice has important consequences which were not capable of being foreseen, does not affect the indifference of the alternatives at the moment of choice. And as regards the other examples, while it is true that a single act may involve a terrible responsibility, it is surely an

exaggeration to speak as if every single act or moment alike carried the same frightful burden of responsibility.

Responsibility implies some task or requirement (*Forderung*) that has to be fulfilled, and the author goes on to speak of the constant tension (*Spannung*) between act and requirement—by which I take him to mean, that we have always to be contrasting, or even opposing, them, and yet have always to be bringing them together again. Before the act is performed, the requirement is there as an end to be realised through the act; after the act is performed, the requirement is the measure of success or failure. Other aspects of the tension are referred to. Requirements may clash, and the agent in fulfilling one must fail to satisfy the others, yet he must act. Guilt and remorse obviously illustrate the tension, but virtue itself may involve it, *e.g.*, it is right to respect and defer to those who are morally above us, but not to do so to the surrender of our own personality. The tension takes a special form in the thought of duty or what ought to be: what is matter of duty is raised above the private will of the individual and contrasted with what he would like to do; and yet it cannot be imposed upon him by compulsion; it must be freely accepted by himself as binding upon him. Another illustration of the tension is afforded by the relation of the moral consciousness to prevailing customs. These latter have a certain authority and binding force, but if it comes to a conflict, the individual must preserve his inner independence and do what seems morally right. We conform all the more readily to the outward customary forms of politeness just because they help to maintain a respect for this inner freedom. Finally, the moral consciousness reveals itself throughout as a consciousness of values, and we are thus brought in sight of the difficult question of the relation of moral values to the other values that enter into human life.

Chap. iii. is occupied with rather abstract discussions about the nature of an ethical principle in general. A principle or law stands above its instances, since its validity does not depend upon them, whereas they must exemplify it. But in the case of an ethical principle this seems not to hold good, for men's actions may not exemplify moral goodness. The difficulty is solved by distinguishing within moral action between the action or event and its moral quality; as action or event it exemplifies psychological law, but so far as it is morally good it exemplifies moral principle. If the difficulty is a real one, it seems to me to be evaded rather than solved by this distinction. The next section deals with the interesting question, In what sense does morality prescribe an infinite task? Kant is censured for taking infinite in the sense of unending or never to be realised. Moral action that never reached its goal would not be truly moral action, any more than a knowing that never attained truth would really be knowledge. Kant's error lies in interpreting infinity in a temporal sense, whereas it is supertemporal. Morality might come to an end in a temporal sense, if there ceased to be any

human or other moral agents in the world, but the supertemporal validity of ethical principle would remain unaffected. Here again the author's solution seems to me open to question. It is difficult to see what sense there would be in speaking of moral principles if there were no moral agents, or how a moral principle which must have a reference to the actual conditions of human life can be so wholly supertemporal. And I doubt whether the author is quite fair to Kant, and even whether he has freed himself entirely from the error which he condemns in Kant; for the meaning which he himself puts on the 'ewige Aufgabe' is 'die unendliche Fülle von Aufgaben, in der die Darstellung [i.e., realisation] einer jeden zur Vorstufe der Darstellung der folgenden wird' (p. 68). In a section on 'Das Sollen' the author contends that Kant takes too narrow a view of ethical value. There are values in life, e.g., love and friendship, which cannot be prescribed or commanded as actions are. "Es liegt gewiss auf der Hand, dass die Liebe der Geschlechter oder die Freundschaft nicht getan oder gemacht werden kann; sie muss über uns kommen, von uns Besitz ergreifen, wir tun sie nicht, wir erleiden sie" (p. 80). Accordingly the notion of 'the practical' must be widened and applied not solely to action but to 'das Ganze der Haltung des Subjekts der ethischen Wertgesetzlichkeit gegenüber' (p. 81).

Chap. iv. on the three 'Grundformen' of the ethical principle connects directly with this criticism of Kant. In place of Kant's one categorical imperative addressed to the will and requiring some particular action the author recognises three kinds of demand¹ which ethical values make upon us: (1) a 'Wesensforderung', which can be expressed in the formula, 'Werde in deiner Person zu einem Wertganzen' (p. 104), (2) a 'Willensforderung', which coincides with Kant's categorical imperative, and (3) a 'Wirkensforderung', which requires the individual at a particular time to realise (so far as he is able) the particular value which is relevant to his particular situation. This last the author regards as a truer version of Kant's hypothetical imperative. Throughout the chapter there is a good deal of criticism of Kant, about which I must be content in the meantime to say that I either do not follow it or do not agree with it. The chapter is a fairly long one, explaining the three 'Grundformen' and their relations; but this kind of detail must be passed over here.

The first section of chap. v. deals with the relation of value to existence or reality, and discusses a 'dialectical' problem involved in it. On the one hand reality cannot already embody values in itself, for in that case there would be for man no task of realising

¹ 'Forderung.' I think we have no single English word that is used in quite the same way as 'Forderung' is. Its meaning can perhaps best be seen by contrasting it with 'duty'. Duty looks from the agent to that which has a claim upon him; 'Forderung' looks from that which has the claim to the agent, calls upon him to recognise the claim.

values; they would already be real. On the other hand reality cannot be alien or indifferent to values, for then the task of realising values in it would lose all meaning. For the solution of the problem the all-important thing is 'die Wirklichkeit von vornherein nicht gänzlich wertabgelöst, sondern als in Wertgeltung stehend zu begreifen' (p. 150). As the meaning of the last phrase is not clear to me, I am not sure what exactly the solution is. For a fuller treatment of the problem the reader is referred to other works of the author with which I am not acquainted. The second section is entitled 'Persönlichkeit und Gemeinschaft'. It deals first with the 'dialectical' difficulty that the self must undergo change in the course of its experiences and yet remain the same. A solution is sought on the lines of the Kantian distinction between the self of transcendental apperception and the empirical self, and we are told that the transcendental self is not 'ein starres Ding oder geistiges Wesen, sondern Funktion, aber Funktion im transzendentalen, nicht im psychologischen Sinne' (p. 157). That the psychological subject is not a 'starres Ding' is obvious enough, but surely it must be a 'geistiges Wesen'; a transcendental function can hardly take the place of a psychical entity. The discussion is not, however, very relevant in ethics. In a previous chapter the author had drawn a distinction between 'Person' and 'Persönlichkeit'. By the former he means the actual individual agent, by the latter the ideal individual in whose life values are being realised to the fullest extent. He now draws a corresponding distinction between the actual society or 'Gesellschaft' and the ideal society or 'Gemeinschaft' in which there is a full realisation of social values. 'Gemeinschaft' is the true goal of the 'Gesellschaft' as 'Persönlichkeit' is of the 'Person'. The parallel between the two distinctions is developed at some length, and two sections follow in which the relation of personal and social values to reality, and the 'dialectical' difficulties involved in the relation, are discussed; but this kind of detail may here be passed over. For a similar reason it may suffice to indicate very briefly the contents of chap. vi., which discusses in successive sections the State and Nation, the Family, and the School. All of these are modes of social union or grouping ('soziale Verbände') which are concerned with values rather than mere economic interests. The author says indeed of the State that its whole significance (its 'Sinn') lies in this, 'dass er im umfassendsten Sinn die Gesellschaft zur Gemeinschaft zu bestimmen, die Gemeinschaft in der Gesellschaft darzustellen, habe' (p. 212), and he hardly seems to recognise sufficiently that there are limits to the efficacy of State action in achieving this aim. But the State rests on the nation as its basis, and the nation is at once a natural and a spiritual fact. Each nation has its own 'Kultur', but each nation has also its special place within humanity as a whole, just as each individual has his place within the nation. The comparison is not perhaps too secure, but the author at any rate adds that the individual can serve humanity only by serving his

own nation. I must pass over much that is interesting in these two chapters, the discussions of the family and the school and of various subordinate topics, *e.g.*, punishment and work; such discussions do not affect the main argument of the book.

The last chapter is entitled 'Freedom'. Its first section deals with the relation of freedom to causality: we must not oppose freedom and responsibility to causality; every act must have its cause, and unless the agent were the cause of his own act he would not be responsible. The difference between moral action and a mere natural event lies in the fact that the moral agent acts with values in view. In the second section the 'dialectical' difficulty is raised that freedom must be real if we are to be able to realise values, but cannot be real in so far as it is itself a task to be achieved. The solution given is that it is real not as property or faculty, but as process; it is not a ready-made possession. This last statement is no doubt true in the sense that there can be a growth of freedom, but the growth must surely be a growth of something, must involve some psychical property; the previous section implied as much. The third section deals at rather unnecessary length with the distinction between end and value, the main point being one which, from the author's point of view, is no more than a truism, *viz.*, that ends may or may not have value, whereas values are always values. The last section has an interesting discussion, first, of the meaning of 'the present' (*e.g.*, 'present moment' 'present generation') when we are thinking in terms, not simply of abstract time, but of content, and, second, of the sense in which the present can take on a character of eternity; it does so, as we might expect the author to say, in so far as it realises in time supertemporal values.

Before passing to the one criticism of substance which I wish to make, I think a word should be said about a formal characteristic of the book, which, if one had plenty of space, could be more easily explained by giving numerous examples than by general description. I may describe it, however, as a certain academic quality in the book which is shown in the interest taken in points of terminology, in drawing distinctions, in raising and solving 'dialectical' difficulties (sometimes of the kind which a teacher might use to exercise the minds of his pupils)—in short a rather disproportionate interest in the technical side of philosophical discussion as contrasted with an interest in the acquisition and communication of new knowledge. One result is that the book is more expanded than it need have been. Take the following example. The author is discussing the relation of act to character and using courage as his instance. After sufficient explanation he says 'die tapfere Handlung ist nur Äusserung des Inneren der tapferen Person', and then continues: "Diese Äusserung des Inneren aber ist, gerade weil sie Äusserung des Inneren ist, nicht die blossе Gelegenheit, bei der sich das Innere in seiner Äusserung eben äussert, sondern sie ist in dem Sinn das Innere selbst, in dem die Person in ihrer Aktualität sich gerade in ihren Akten aktualisiert"

(p. 179), and so on. This laboured expansion of a not very abstruse statement is hardly needed in a book not meant for beginners. Another example may indicate how the author tends to see difficulties where the reader would hardly suspect their presence. "Die Persönlichkeit ist zunächst Forderung, als solche also nicht wirklich, darum von der wirklichen Person zu unterscheiden. Aber die Forderung ist zugleich die Forderung von etwas Wirklichem, dem wirklich sich selbst auf die Werte beziehen könnenden Selbstbewusstsein, also der wirklichen Person, in der sich die Persönlichkeit selber muss darstellen können. Die Persönlichkeit ist *gefordert*, die Person ist *erfordert*, durch den Wert als Aufgabe" (p. 86).¹ In the situation here described the author sees an 'eigentümliche Problemverschlingung'. It seems to me that an illusion of complication and subtlety is produced in a purely verbal way by the use of two pairs of closely allied words—'Person' and 'Persönlichkeit', and 'gefordert' and 'erfordert'—which suggest the need of subtle distinctions. The German language lends itself, as we know, to the construction of long and involved sentences and long compound words. Our author is not specially guilty of the long and involved sentence, but he besprinkles his pages liberally with words such as 'Aufeinanderbeziehbarkeit', 'Subjektsbezogenheit', 'Familiengliedhaftigkeit'. Sometimes, no doubt, such words may be convenient.

So far as the matter of the book is concerned the one or main criticism I wish to make concerns the author's relation to Kant. Prof. Bauch is regarded, I believe, and seems to regard himself, as being in the main, so far as ethics is concerned, a follower of Kant. He thinks that in certain ways Kant's doctrine is narrow and defective, and he therefore expands and corrects it, *e.g.*, he replaces Kant's one categorical imperative by the three 'Forderungen' of chap. iv. But he apparently regards the modifications which he introduces as not affecting his agreement in principle with Kantian doctrine. To me his divergence from Kant seems much more serious. In the KPV Kant asserts very clearly and emphatically that the all-important question of method in ethics is this: Are we to take the conception of law or that of good as fundamental? Now Bauch takes neither the one nor the other: the conception which for him is fundamental, and which dominates his whole treatment of the subject, is that of objective values.² It is this conception that gives unity to the book, and, if we wanted to sum up the contents of the book in a single phrase, we could say that it is a discussion of the realisation of values in human life. It is by reference to values that the author would explain both law and good. A strict Kantian, on the other hand, would have to regard, it seems to me, Bauch's

¹ In the German text not only are the two words italicised, but the rest of the sentence is in spaced type.

² Kant's own use of the term value in the *Grundlegung* is not relevant here: his good will is not a will to realise any value, it is a will to obey the moral law.

use of the conception of values as an attempt to combine elements from the other two conceptions in an inconsistent way, an attempt to get the advantage of both without encountering the difficulties involved in them. The conception of value is obviously more allied to that of good than to that of law, but Bauch tries to secure an authoritative character to values by insisting that their validity is wholly independent of individual subjectivity. They can be realised only by the action of individuals, but their validity is wholly independent of the individual's desire to realise them. They are raised above us, make demands upon us; he uses the phrases 'wir Werten dienen', 'uns in den Dienst von Werten stellen' (p. 304). Now Kant, it will be remembered, held that, if we start with good, it must be regarded as object of desire and must ultimately be referred to the desire for what pleases. We need not follow him in reducing all objects of desire to pleasure or the means to pleasure, but the conception of a good does seem to imply a reference to desire. A thing may be good although particular individuals A and B do not desire it, but if nobody at all desired it how could it be regarded as a good? If A or B has no ear for music, the hearing of fine music by those who have the ear for it is none the less a good, but it would be unmeaning to speak of music as a good in a community of deaf people. Now in the same way it seems impossible to make values so independent of subjectivity as Bauch would have them to be. To the existence of values *as values* it seems necessary that they should be appreciated and their realisation desired.¹ Now if they are sought because they are appreciated and desired, they have no need of an authoritative character (a 'Forderungscharakter') as well, and if they are not appreciated or desired, the authoritative assertion of their value and claims has no basis, no support in actual experience. It is useless to dilate on the value of music to the person who has no ear for it. In Kant's view it is of the very essence of the moral law, on the other hand, to have no regard for the agent's desires at all; the law lays down what he ought to do, no matter whether he likes it or not. Of course the agent's recognition of the law as law is implied, but the law holds out no inducement to him; it commands his obedience as that of a rational being to the law which reason itself recognises. Bauch would bring the categorical imperative under his own scheme by saying that law or order is itself a value, a value moreover of the first rank and such as to take precedence

¹ When Bauch says (p. 292)—"Der Zweck besteht immer nur für mich, insofern ich ihn zum Ziele meiner Absicht setze. Der Wert dagegen hat einen von meiner Absicht unabhängigen, meinem Willen entrückten Bestand"—this is not to the point. To say that we cannot make and unmake values at will does not affect the fact that they do not exist for us *as values* unless we appreciate them. On the other hand when Bauch says (p. 305)—"Es ist das Gefühl, das als Wertgefühl in der Hauptsache die Beziehung zwischen uns und den Werten herstellt und darstellt"—he is conceding the necessity of a subjective factor.

over all other values. But once it takes a place as one value among others, this assertion of its supremacy seems rather arbitrary, and in any case it loses its categorical character, for a value exists as a value only for those who appreciate it, and it can be a source of hypothetical imperatives only. I am not advocating Kant's doctrine—it has its own difficulties—but it seems to me that the conception of value confounds together the very things that Kant strove to distinguish as clearly and sharply as possible.

Bauch's 'Wesensforderung' seems to me to mark another divergence from Kant. The 'Wesensforderung' sets up as an ideal the development of all the individual's potentialities for the realisation of values. We may say that it represents in effect an attempt to supplement Kant's moral will by, or include it in, the wider Greek conception of *ἀρετή*. The 'Wesensforderung' is said to be wider and richer than the moral law in the narrow sense. The conception of this 'Wesensforderung' is difficult enough in itself, for it is a demand which includes demands some of which can be commanded but others not, and others again which cannot even be striven for but are as gifts bestowed. But in any case it is not a Kantian conception: rather it is in line, as Bauch himself says, with the Greek *καλοκἀγαθία*, Shaftesbury's 'harmony', Schiller's 'schöne Seele', and the like. Kant speaks, it is true, of the development of our 'Naturanlagen', but simply as a moral duty. Bauch would still give to Kant's moral law (with its 'Willensforderung') the central place in ethics; but a moral will whose function it is to realise values, and which has to be supplemented by other excellences and values, is not Kant's moral will.

My lack of acquaintance with Bauch's metaphysical writings precludes me from dealing with his conception of values on its metaphysical side, but what he says in the present work about ethical values may excite some questionings on the reader's part. Values seem to be like Platonic 'forms'. Bauch speaks in fact of a 'wahres sein' 'das nicht selber ist, sondern ἐπέκεινα τῆς οὐσίας, als Sein jenseits des Seins in der Geltung des Wertes liegt' (p. 87). I have difficulty in understanding what this 'wahres Sein' is. And when Bauch says that for the very possibility of moral beings in time the moral value which it is their task to realise is 'immer schon vorausgesetzt' (p. 65), he seems to me to be turning things upside down. But I may have failed to understand his metaphysical view.

It should be said that the book is very well printed (though not without some misprints) in clear black type on a broad page with good margins. There is no index, and the table of contents is meagre, though it shows the general plan of the book clearly enough.

H. BARKER.

Platon. By LÉON ROBIN. Paris : F. Alcan, 1935. Pp. viii, 364.
35 fr.

ALL serious students of Plato will eagerly welcome this systematic study of his philosophy by the distinguished author of *La Théorie Platonicienne des Idées* and *La Pensée Grecque*, whom we have also to thank for the excellent Budé editions of *Phaedo*, *Symposium*, and *Phaedrus*. They will find in the volume at once a very careful, and in many ways singularly successful, attempt to present and do justice to Plato's maturest thought, and also a full account of its development, so far as that development can be traced in the long series of dialogues. The book is naturally not always easy reading ; naturally also, no complete unanimity of conviction is likely to be produced on some of the more obscure issues which have to be raised. But it may, I think, be said that no point is raised upon which the writer has not much to say that is deserving of the most serious attention, or on which he does not leave the reader with the sense that he must either accept the author's decision or know very definitely why he dissents from it. In the main, allowance being made for the cases where the writer is necessarily and avowedly going behind the express declaration of the Platonic text and resorting to "construction," the representation given of Plato's thought seems to me, in its main lines, thoroughly "objective," and I am particularly delighted to see how fully it is recognized that the fundamental intellectual passion of Plato all through his long life was that of the statesman and moral reformer. M. Robin is not one of those numerous expositors who fall into the mistake of treating the *Laws* as though it were a work of secondary importance for our understanding of Plato.

The book is divided into six chapters, which deal with (1) the facts of Plato's life and the history of his writings, (2) the Platonic ideal of knowledge, (3) the theory of its methods, (4) the metaphysical doctrine of the relation of Being to Becoming, (5) the general cosmological theory of the nature of the world, the soul, and God, (6) the conduct of life, individual and social. In a short conclusion we are then told in general outline something of the subsequent influence of Plato alike on later Greek thought, on early Christianity, and on modern philosophy.

On the opening chapter I may content myself with one or two very brief remarks, which seem to be rendered necessary by one or two of the author's allusions. In the main he seems to me to exercise an excellent judgement both in what he accepts as certain and in what he decides to leave in question of the later traditional versions of Plato's life. I note that in his treatment of the writings of disputed authenticity, while he abstains from definitely pronouncing against either the *Epinomis* or the more important of the *Epistles*, his text seems to be more decidedly against the latter than against the former. One of his arguments, I own, seems to me less convincing than it does

to himself. It is urged that we must not make too much of the admitted close resemblance between the style and diction of *Epp.* VII. and VIII. and those of the dialogues with which, if genuine, they must be roughly contemporaneous, because a fabricator would, of course, take care to maintain verisimilitude in the matter (p. 31). May it not be replied that it is precisely what the fabricators of certainly spurious "epistles" whose productions will be found in the *Epistolographi Graeci* have not done? I note that on the question of the element of history in the Platonic account of Socrates M. Robin supposes himself to be diametrically at variance with Burnet and myself. We, he says, want to interpret the "Socratic" dialogues in the light of the thought of the Socratic age, whereas it is clear that they must really be read all through with reference to the controversies of Plato's own generation. Now Burnet would at once have admitted the point with reference to just those works of which it is most obviously true, the great "later" dialogues in which Socrates is no longer the principal exponent of the thought; whether it is *equally* true of the earlier "Socratic" dialogues seems to me quite another question. (It is true that the *Philebus* is a most important "late" dialogue, and, that Socrates is there once more the chief speaker, but Burnet's explanation, I think, holds good,—that this is "the exception which proves the rule." Socrates can take the lead again, because the main subject of discussion, the application of Pythagorean categories to problems of conduct, is precisely in the line of his own interests.) In point of fact, I believe the difference of view between Burnet and myself and M. Robin is much less considerable than his language suggests. His own version of the matter is that there were different views among the Socratic men as to the exact significance of the Master's life and doctrine, and that Plato's representation is that which *he* personally regarded as the most faithful. If all the implications of such an admission are realised, it is all that either Burnet or myself need ask for; neither of us, I am sure, has any need to deny what M. Robin says on page 27, that Plato is a mirror which reflects the thought of Socrates, but has its own "curvature." That, I should have said, is true of the most "objective" attempt of any one man to reproduce the thought of another. (I am a little surprised that on the opposite page it should appear as an argument against the "historicity" of the picture of Socrates in the *Phaedo* that "it is strange that Socrates should have put off the examination of the theory of the soul" on which the whole argumentation turns to the last day of his life. All that I should feel entitled to contend for is that we must believe Plato when he tells us that Socrates spoke of this theory and the grounds of his confidence in it to *Cebes and Simmias* in his last hours; he may well have done that even if he had made the *examen* of the doctrine in his own mind many years before, and even if he had in fact dwelt on the same thoughts in conversation with the same persons on earlier occasions.)

The general lines which a study of Platonic metaphysics, epistemology, and cosmology by M. Robin would follow, might have been anticipated from a knowledge of his earlier writings. It was certain that the considered teaching of Plato would be found primarily in the great series of "late" dialogues from the *Sophistes* to the *Laws*, particularly in the *Philebus*, and in Aristotle's reports; one could have felt sure in advance that M. Robin could subscribe neither to Professor Shorey's exaggerated estimate of the "unity" of Plato's thought, nor to his contemptuous dismissal of the Aristotelian evidences. A reader of *La Théorie Platonicienne* would also be prepared to expect a certain tendency to see Plato a little through the eyes of the Neo-Platonists, and a student of M. Robin's edition of the *Phaedrus* to find him credited with a good deal of belief in planetary astrology.

On the first two of these points M. Robin is, I believe, entirely justified. His treatment of what one might perhaps call the markedly new "tonality" of the later dialogues seems to me eminently judicious, and I believe him right in the view that if there is one dialogue more than any other which takes us to the very heart of Plato's thinking, it is the *Philebus*. It is a point of agreement with what seems to have been Burnet's final view that M. Robin finds the turning point of the development in the *Parmenides*, of which he gives a remarkably full analysis. Personally I do not feel quite so satisfied that a dialogue which is so manifestly, as M. Robin allows, largely a parody of Megarian dialectic must mark a *crise* in the mental development of its writer; I should rather conjecture that any *crise* there was probably fell between the composition of the *Parmenides* and that of the *Sophistes*. As to the nature of the "crisis," M. Robin's version of it seems to me in the main sounder than Burnet's. In view of the testimony of Aristotle I cannot believe that there was ever any question for Plato of a "renunciation" of the theory of εἶδη. Also it is only right to do justice to the underlying truth in Shorey's thesis, as M. Robin does, by calling attention to certain definite anticipations in earlier dialogues, from the *Phaedo* onwards, of that doctrine of the "interconnexion" of the εἶδη with one another which is fundamental for later Platonism. What is admissible, I should say, is that the attitude of these later dialogues to the world of "sensibles" differs altogether from that of the *Gorgias*, *Phaedo*, or even *Republic*. The sensible world is no longer an "other" hostile to the world of form and spirit, but the "other" complementary to it and necessary as the medium of its expression. M. Robin truly says that genuine Platonism is very different from the one-sided "spiritualism" often called by the name, but if we had only the dialogues earlier than the *Sophistes*, it would certainly be very difficult to exhibit the difference.

Again M. Robin is, I think, entirely right in laying the weight he does upon the express statements of Aristotle about the tenets of Plato, and in attempting to make the interpretation of them the

clue to the full understanding of the *Sophistes* and the other dialogues written at the very time when Aristotle was a member of the Academy. The contemptuous pose of Shorey in the matter is, I suppose, due to a suspicion that the notices in Aristotle of the theory of the composition of the εἶδη from the "One" and the "Great-and-Small" are a meaningless perversion of the account of the class of the μικτόν in the *Philebus*. This ought to be incredible in any case, since the μικτά specified in the *Philebus* are none of them εἶδη, and their constituents are never called by the technical names Aristotle uses. And M. Robin, I think, administers the *coup de grâce* to any such theory, by his very careful discussion of the meaning of Aristotle's account of the identification of εἶδη with "numbers," and the connection of the thought with the doctrine of the two different kinds of measurement, philosophical and "vulgar," illustrated in the *Politicus*. The solid result of this investigation is that the Platonic method of "division" is put at last in the true light, when it is made to appear not merely as a sort of method of formal classification, but is one of *specification through measurement*. The emphasis laid on this side of the matter is, if I may say so, one of the most valuable things in M. Robin's work.

I am not quite so clear as to the justification of reading into Plato quite as much as M. Robin does of the Neo-Platonic hierarchy of "intermediate" links between the supremely intelligible and the sensible. Thus I feel some doubt when the discussion of Plato's doctrine of God leads to the conclusion that the words θεός, θεοί, in Plato cover no less than four orders of being (a) the sensible world as a whole, and its most exalted members, the stars; (b) the "demiurge" of the *Timaeus*, a symbol of "intelligence contemplating the intelligible and fashioning a copy of it"; (c) the "intelligible model," i.e., the whole system of εἶδη; (d) the good, which, if I understand what is said of it (pp. 249-250) aright, is taken to be a transcendent personal deity. It may be that Plato ought to have distinguished all these graded entities in order to make his different utterances into a coherent system, but it remains the fact (as M. Robin is no doubt aware) that he does not make the distinctions for us, and one may perhaps be right in being cautious about virtually tracing back to him the whole later hierarchy of νοητοί, νοητοὶ καὶ νοεροί, and νοεροὶ θεοί.

I feel still more doubtful about the justification of finding astrology of any kind in Plato. It may be a question whether it is not a chronological error to detect astrology in the thought of any Greek writer before the days when the East had been opened up to general intercourse by the conquests of Alexander. In the case of Plato the only unmistakable allusion to astrological fancies of any kind that I can detect is the single sarcastic reference of Timaeus to the alarm produced by "occultations" and similar phenomena in those who have not mathematics enough to anticipate them. M. Robin has, I fear, been led by his readiness to ascribe to Plato the sort of ideas

we find in Manilius to misrepresent more than one passage in his text. Thus at page 89 and elsewhere the address delivered in the *Timaeus* by the demiurge to the newly created souls, who have been stationed each in one of the stars, in order to learn the laws of the universal world-order, is said to be addressed to astral deities, who are later on to fashion the souls of "mortals." M. Robin forgets that in this very discourse it is explained to the auditors that each of them is in due time to be incarnated as a *man* (and also apparently that the star-gods of the dialogue only make the mortal, not the immortal, component of the human souls). The thought is simply that, to preserve the due balance of "opposites" in the world, there is a one-to-one *correspondence* between the number of its immortal and that of its mortal denizens.

It is more serious that in the exposition of the myth of Er (p. 184) it should be assumed that the souls who are choosing a great life from among the *παράδειγματα* set before them only know, at the moment of choice, the general character of the life chosen (whether *e.g.*, it is that of a prince or a private person); the details of their destiny are only disclosed after the choice has been made, and are completely determined by the course of the stars, (in fact, by a "geniture"). I submit that this is a misinterpretation. What a soul is supposed to have before it is not a sealed document, but a *παράδειγμα*, a *figurine*, and the natural supposition is that the details of the life chosen are to be seen there by a soul that will look with proper attention. The soul of Odysseus need surely not have taken so much time over its choice if all it had to do had been to find a *παράδειγμα* labelled "private person"; obviously Odysseus was so long over his choice because he was making an investigation into details. Nor do I see that the part played in the myth by Necessity, her spindle, and the Fates involves any more "astrology" than Kant's insistence that man is a member of the "kingdom of nature" and subject to its laws, as well as a legislator for himself in the "kingdom of ends." I dwell on the point because M. Robin's belief in Plato's astrological credulity leads him later on, as it seems to me, to minimise the freedom Plato allows to the will. This freedom, granted M. Robin's assumptions, as he says, comes to little more than this, that each soul absolutely "predestinates" itself by its initial choice of a life, a choice which, on M. Robin's interpretation, is made very much in the dark; and this gives rise to the awkward question whether the soul which makes the mistake of choosing the life of a "tyrant" does not once for all predestine itself to damnation as an "incurable." But to reason so seems to me to miss the point of Plato's declaration that *ἀρετή* is *ἀδείποτον*. If you do make the mistake of choosing to be born as a 'tyrant,' you have, no doubt, made virtue hard for yourself. You have chosen a life in which your competitors may, for example, prepare a 'Thyestean banquet' for you. But even so, you can confront the consequences of your error in the spirit of a free man, or you can meet them like a worm.

Plato thought badly of the life commonly led in kings' houses, but, I take it, he would not have denied that "even in a palace life may be well led," and has been well led by men like his own friend Dion.

There are naturally other points of detail where I do not always feel happy about M. Robin's solutions of difficulties. I could wish for example, that in this very matter of the myth of Er he had not, like Adam, contrived to make the scene take place at the centre of the earth. That, I feel, must be wrong, and I believe Stewart's *Myths of Plato* (a work not mentioned in the Bibliography) is a sounder guide on many of these points. Similarly I can hardly sympathize with the attempt to set aside the express statement of Timaeus that the 'circle of the other' revolves in a sense counter to the 'circle of the same;' and in discussing the famous astronomical passage *Laws* 821-822, I think it an error of judgement to treat the well-attested statement of Theophrastus about Plato's abandonment of geo-centricism as lightly as M. Robin does. His own interpretation of the passage of the *Laws* amounts to little more than a suggestion that in some way it alludes to the famous planetary theory of Eudoxus. I should myself say that it certainly does so, and that the intention is to reject the theory precisely because it implies that the 'diurnal revolution' is one component of a planet's orbit. (Like Shorey, M. Robin, I think, has neglected to observe that what is meant by the denial that a planet *πλείους ὁδοῦς φέρεται* is not simply that its motion is not really *irregular* but that it is not *composite*,—as, of course, it must be if the 'diurnal revolution' enters into it.)

I have spoken at such length of certain points in M. Robin's book which seem to me open to some question, that I have barely left myself space to say how admirable I find the whole of his main treatment of Plato's epistemology, metaphysics, psychology and 'practical philosophy.' I have very rarely read a volume which seemed to me to give at once so full and so true an answer to the questions, what, according to Plato, can we know, what is the nature and destiny of our souls, how ought we to live, as individuals and as communities. Though no student of Plato can expect to prosecute his studies far without a command of the great and growing literature on the subject produced in France, and no such student therefore can afford to be ignorant of French, it is much to be hoped that so excellent a volume will soon be nationalized among ourselves by an accurate and idiomatic English translation.

A. E. TAYLOR.

Aristotle's Physics, a revised Text with Introduction and Commentary. By W. D. Ross, Provost of Oriel College, Oxford. Oxford: Clarendon Press, 1936. Pp. xii, 750. 36s.

THE Provost of Oriel's edition of the *Physics* is a boon to all serious students of Aristotle only comparable to that already conferred upon them by his well-known edition of the better-known *Metaphysics*.

Indeed, considering the previous state of the text of the *Physics* and the obscurity of so much of the argumentation, the second work appears to me perhaps the more indispensable benefit of the two. The care and pains which have been lavished on the volume by all concerned in it, from author to printer, are indeed beyond all praise. (In passing I may remark that the printing and proof-correction have been carried out with such care that I have only noticed two serious misprints in the whole work, though it would be wonderful if a few more could not be detected in a large volume containing so many hundreds of references. On p. 467 the name of Eudemus has been accidentally substituted for that of Eudoxus in a reference to the supreme mathematical achievement of the latter, the invention of the method which Dr. Ross continues to describe by the convenient but misleading name of that of 'exhaustion', though its real peculiarity is that it successfully avoids the impossible task of *exhausting* an infinite series. Similarly on p. 591 the name of Epicurus is wrongly given as Empedocles, though the references supplied show that it is Epicurus to whom Dr. Ross is really referring.) Vast pains have been taken with the constitution of the text, which had previously been left in a very unsatisfactory state by the two editors on whom the modern student has hitherto been chiefly dependent, Bekker and Prantl, with the result that it is at last possible to read the treatise for the first time with something like comfort. Dr. Ross has not only recollated the chief MSS. of the *Physics*, including J, the value of which was not sufficiently perceived by earlier editors, but has diligently availed himself of the evidence of the ancient paraphrasts and commentators, Themistius, Simplicius, Philoponus. His own numerous corrections of minor points are, so far as I can judge, made with a generally excellent judgement and a thorough knowledge of Aristotelian idiom. I have no doubt that a large number of them will henceforth pass into the accepted *textus receptus*. And the improved punctuation of many passages, which for the first time makes the course of the argument perfectly clear, may perhaps be felt to be an even greater achievement than the successful correction of particular passages by felicitous and wary conjecture. It would be out of place in a philosophical journal like *MIND* to devote much space to examination of detailed points of textual criticism, but I may perhaps be allowed to suggest that the student will get a particularly good illustration of the superiority of the new text of the *Physics* to its predecessors by simply comparing the confused and difficult argument of 225b 35-226a 10 (where Aristotle is contending that a $\gamma\epsilon\nu\epsilon\iota\varsigma$ of $\gamma\epsilon\nu\epsilon\iota\varsigma$ itself would involve an indefinite regress) as it stands in Dr. Ross's text with either Bekker's or Prantl's version of the same passage.

In the long and careful *Introduction* will be found a full discussion of such topics as the structure of the eight books which we know traditionally as the *Physics*, the peculiarity of the dynamics and the mathematical doctrine of the 'infinite' presupposed by the argument,

the history of the gradual development of Aristotle's cosmological conceptions into the final form which they assume in the well-known chapters of *Metaphysics* Λ. Dr. Ross's conclusions on the structure of the work may be briefly summarised thus. Bk. VII is certainly no part of the work, breaking in, as it does, on the otherwise continuous discussion of motion and its presuppositions, which fills V, VI, and VIII. It is apparently an earlier independent discussion of the same problems, dating from a time when Aristotle has not yet formally broken with the Platonic doctrine of Form-Numbers, and may well be, as Torstick held that it was, all that still survives of the *Physics* in its earliest form. Of the two texts of this book, that now commonly known as *α* undoubtedly comes from the hand of Aristotle himself; *β* (which cannot be *proved* to have existed before the third century B.C.) is a comparatively defective reproduction of the same matter, which *may* conceivably go back to the not very intelligent or accurate notes of some actual auditor of Aristotle's lectures. Bk. I again stands a little by itself and has all the appearance of an independent study of the *ἀρχαί* of cosmology; II-IV form a continuous discussion, and it is they, with or without I, which are properly τὰ φυσικά, V, VI, VIII forming a second continuous treatise τὰ περὶ κινήσεως. On the debated question of the relative dates of the two discussions, it is held, rightly I believe, that II-IV must be earlier than the other, though Dr. Ross does not, I think, lay much stress on a consideration which would weigh heavily in my own mind, that the careful discrimination in the second discussion between μεταβολή in general and κίνησις, indicates a waning of the influence of Plato, who, in *Laws* X, for example, unhesitatingly treats γένεσις and φθορά as κινήσεις, exactly as Aristotle does in *Physics* II-IV, but is careful not to do in V, VI, VIII. As to the general place of the whole work in the Aristotelian corpus, the conclusion reached is that, while the later parts of it may well have been in the main composed during Aristotle's years at Assos, too much must not be crowded into this relatively short period, and it is probable therefore that a good deal of the earlier stuff may actually date from the later years of Aristotle's first residence in Athens before the death of Plato. This seems to me a highly judicious verdict; it is plain, I think, that the numerous and varied researches with which we know Aristotle and his co-adjutors to have been occupied between 335 and 322 leave little time for the elaboration of the *Physics* during his period of activity at the Lyceum, and, on the other side, not all the work which must have been produced before 335 can be well supposed to have been condensed into the very few years of the residence at Assos. Hence there seems no escape from the inference that a fair amount of *our* Aristotle must go back to the days when the philosopher was still one of the 'men about Plato'. Though, if this be true, as I think it is, it immediately suggests a further possible inference of which Dr. Ross takes no notice, and to which I will return in a moment. In dealing with the mathematical and dynamical

assumptions of the *Physics*, Dr. Ross is careful to point out very clearly just where Aristotle's fixed preconception of the communication of motion as the *overcoming of resistance* leads him astray, and he has been at particular pains to examine the philosopher's views on the 'infinite', and his strictures on the famous arguments of Zeno (in Bk. VI). As to the 'infinite', I am not sure that I quite understand Dr. Ross's own position. He unhesitatingly rejects the Aristotelian thesis that the infinite only exists 'in potentiality', on the ground that we cannot really believe that the points on a straight line are *created* by dividing it, or by *arresting* the path of a particle moving along it (though I suppose this is what M. Bergson, for example, *does* believe). He commits himself therefore to the realist view that 'the points actually exist.—I suppose, as Aristotle would have put it, as *ἐνπάρχοντα* in the line. At the same time he will have nothing to do with the Dedekind-Cantor 'actual infinite', of which he says that it merely replaces one unintelligibility by another. But are the two positions really compatible? If the points exist in the line before we divide it, are we not committed, whether we like it or not, to the 'actual infinite'? and should we not rather say of Dedekind and Cantor that what they have done is to replace a paradox by a truism (since, after all, it is a truism that an infinite well-ordered series, like that of the integers, can be put into a one-to-one correlation with a 'proper part' of itself)? Does Dr. Ross mean that there is, after all, something fundamentally irrational about both number and motion? The point comes out with special clearness in the discussion of the *ἀπορίαι* of Zeno, which are treated with great fulness both in the *Introduction* and in the commentary on Aristotle's criticism of them in Bk. VI. Dr. Ross's position may be said to be this. Aristotle's strictures on Zeno's reasoning are perfectly valid as *argumentes ad hominem*; Zeno does commit the fallacies of which Aristotle accuses him. But at the same time, it remains true that Zeno has called attention to something inexplicable in motion, and no one has ever succeeded in removing the inexplicability. Now I am not sure that I quite follow the thought here. Does it mean merely that Zeno has shown that motion is inexplicable in the sense that you cannot explain it away into anything simpler, in fact that you cannot say 'how motion is done' except by saying that it is done by *moving*? This, I should say, is true, but does not show that there is anything 'irrational' in the concept of motion. Or is something more than this meant, and if so, what?

As to the very careful discussion of Zeno's actual arguments, I have only two remarks to make. One is that, granting that the *ἀπορίαι* of Zeno rest upon fallacies, as Aristotle alleges, it seems fairly clear—though Dr. Ross does not mention the point, that Zeno's method was that described as his by Plato in the *Parmenides*. The premisses from which he reasoned were those of his pluralist opponents, and he is fairly entitled to avail himself of any concealed fallacies they contain, in order to discredit them. The other is this.

No one has shown better than Dr. Ross himself in his commentary, that Aristotle's account of the most difficult of the arguments of Zeno—that about the three sets of bodies in the 'stadium', is very obscurely stated. It is perhaps impossible without a free use of unverifiable conjecture to be sure exactly how Zeno supposes the three sets of bodies to be placed. (One has only to read Dr. Ross's own account of the disagreements of critics on the point to be satisfied of this.) Now does not this suggest that Aristotle may be here reproducing a criticism of Zeno's argument which he did not himself originate and perhaps did not quite fully understand? If he had devised the criticism for himself, is it likely that he would have left the statement of the *ἀπορία* to be resolved so ambiguous on a fundamental point? Is it not likely that the criticism of Zeno's arguments about motion may have been originally the *Gemeingut* of a group of Academics from whom it has passed to Aristotle? If so—and I think we may feel fairly sure that the disciples of the author of the *Parmenides* would discuss these *ἀπορίαι*—I think it becomes an intelligible possibility that the discussion of the problem of the 'bodies in the stadium', not being originated by Aristotle, may not have been fully understood by him and that this is why his account of the matter leaves it so obscure what Zeno's argument actually was.

This reflection leads me to make one further more general observation. When a writer has dealt so generously with his readers as Dr. Ross, it is invidious to complain that he has not accomplished even more, and consequently the reflection I am about to make should be taken not as a complaint but as a mere suggestion about a field of inquiry which still remains to be worked. I find it hard to resist the conviction that there is, running through a great deal of the *Physics*, an amount of covert criticism of specific utterances in the Platonic dialogues of which Dr. Ross's commentary, perhaps from the laudable motive of avoiding undue prolixity, takes no account. For example, the words *εἰ τὰ πάθη κινήσεις* (224b 13) seem to me to allude definitely, in an unfavourable sense, to the ingenious attempt to provide sensationalism with a metaphysic in the *Theaetetus*, which turns precisely on the view that a *πάθος* is a *κίνησις*. In 224b 20 ff. (on the different senses of the phrase *μὴ ὄν*) again, I find it hard not to see a definite, and rather disparaging, reference to the discussion in the *Sophistes* of the relations between *κίνησις*, *ὄν*, and *μὴ ὄν*. I suspect that Aristotle means to be criticising the Academic language about 'becoming' and 'not-being', and intends to hint that Plato has not in the *Sophistes* sufficiently explained in what sense it can be said that in the process of *γένεσις* a *μὴ ὄν* somehow becomes an *ὄν*. So again at 250b 8 the remark that two *φθοραί* may be so far 'opposed' that the one is pleasant the other painful must be supposed to have some motive which is not apparent on the surface. Aristotle seems to me to be clearly thinking of the assertion of Plato's *Timaeus* that while death from disease or wounds is painful, dis-

solution from old age 'in the course of nature' is actually a pleasurable experience. So once more, throughout the argument of *Physics*, VIII, 2-3, I suspect a great deal of hidden allusion to the same section of the *Theaetetus* of which I have already spoken; 2 in particular seems to me to be directly inspired by the desire to controvert in principle the division there proposed of *κίνησις* into two and only two fundamental sub-species, *φορά* and *ἀλλοίωσις*. To mention only one further illustration, the remarks about the *ἄπειρον* involved in the *γυγνόμενον* and *φθειρόμενον* at 237b 15 look to me like a definite allusion to the *Philebus*. It is the very point which, in that dialogue, leads to the introduction of the category of the *ἄπειρον*.

As I say, I do not mean in any way to complain of Dr. Ross for not having mentioned these references in a work already necessarily so lengthy. I merely suggest that careful study would probably reveal many more such allusions and that there is here a possible subject for a fruitful dissertation which might discuss the whole question of Platonic and Academic constituents in the Aristotelian *Physics*. To Dr. Ross himself I can feel nothing but gratitude for the way in which he has supplied all students of Greek thought with an invaluable work.

A. E. TAYLOR.

Guide to Philosophy. By C. E. M. JOAD. London: Victor Gollancz, Ltd., 1936. Pp. 592. 6s.

DR. JOAD'S *Guide to Philosophy* is in three parts. In the first, which is headed "Theory of Knowledge", he discusses problems of perception, the distinction between rationalism and empiricism, and the nature of logic. The second part is called "Critical Metaphysics". Here various commonsense notions, such as "substance", "change", "cause", and "the self", are subjected to critical examination. The conclusion reached is that, because these notions can hardly withstand criticism, the world must be very different from what it appears to be. Thus the reader is introduced to the view that metaphysics is concerned with the world, not merely as it appears to be, but as it really is. In the third part, headed "Constructive Metaphysics", the author gives accounts of some of the leading attempts, from Plato to Whitehead, at exhibiting the nature of reality in distinction from the world of appearance. Dr. Joad's intention, however, is not to write a history of metaphysics, but rather to call attention to what he considers are the main problems discussed by metaphysicians. It should also be pointed out that he does not claim, in this book, to develop a philosophical position of his own, although he admits his personal leaning towards elements in the philosophies of Plato and Meinong. In consequence, Plato's theory of forms and the theory of subsistent objects are given more prominence than they would receive from most philosophers in a book of this character.

But on several occasions the reader is warned of this bias. There are short bibliographies to each chapter, a general bibliography (which contains, however, only six books), and an index.

It will be best to discuss briefly each of the three parts and then to make some observations on the book as a whole. In the first part, the discussion of perception is admirable. The difficulties with which naïve realism is faced, both from the point of view of physics and physiology, and because of the existence of illusions and hallucinations, are clearly indicated. Then the growth of subjective idealism is accounted for. Some objections against subjective idealism are developed, along with some realist theories of perception. Although this train of reasoning is very well conducted, in the course of it Dr. Joad makes some historical statements which are open to question. On page 30 he writes that Locke, Berkeley, and Hume "did not introduce scientific considerations into their arguments, or did so only to a very small extent". And he suggests that this was because they lived in the seventeenth and eighteenth centuries "when the sciences of physics and physiology were comparatively immature". This, I think, gives quite a false impression. The arguments from physics and physiology seemed just as decisive at that time as the arguments from illusion. Galileo introduced the distinction between primary and secondary qualities for physical reasons, and all the subsequent philosophers were influenced by the point of view of the physicists. Furthermore, it is hard to understand why Locke should have commenced his *Essay Concerning Human Understanding* with the assumption that ideas are the immediate objects of consciousness, unless he had been convinced by the physiological arguments, which, by the way, were already known to Descartes. Nor was Berkeley innocent of physics. For he wished, among other things, to give a phenomenalist account of physics which should cut the ground from under the feet of those who thought that physics supported materialism. His motives were not unlike those of Sir Arthur Eddington. In spite of this false impression in Part I., on pages 561-562 Dr. Joad quotes Whitehead to the effect that Locke was influenced by the physicists. Hume, I suppose, who was impressed by Bayle and the ancient sceptics, owed less to physics than Locke and Berkeley did. Again, in connection with Berkeley, Dr. Joad omits to notice his most famous argument in favour of idealism, the argument that there is a contradiction involved in the very conception of something existing which is not thought of. This is important because, since Berkeley, idealist arguments have not generally been based on the nature of perception, but upon this alleged contradiction. It is accepted by philosophers as different as Fichte and Bradley, and is repeated to-day by Mr. Oakeshott in his *Experience and its Modes*. This is an argument, then, which should not have been omitted. Again, most philosophers would hold that Hume is more accurately described as a phenomenalist than as a solipsist. Here again Dr. Joad has followed Reid's account of English

empiricism which, although inaccurate, is picturesque and traditional. Bertrand Russell's *Problems of Philosophy* can hardly be regarded as "one of the starting-points of modern Realism" (pp. 101-102). Finally, no bibliography on perception can hope to be complete without mentioning Professor Price's *Perception*. In spite of these errors, which are mainly historical, I must repeat that, taken as an introduction to the *problems* of perception, Dr. Joad's discussion is very good.

The chapter on "Logic and the Laws of Thought" is not so successful. The account of induction, based mainly on Russell's *Problems of Philosophy*, is rather out of date. Nor is there any serious attempt to give an account of scientific method. This is an important omission, for one of the most pressing tasks of the philosopher is to show how philosophy differs from empirical science, and this cannot be done unless he can describe the methods of empirical science. Dr. Joad mentions Aristotle's theory of the special sciences as resting upon unproved assumptions and proceeding demonstratively from them, as though this conception were adequate to account for empirical science as we know it to-day. And there is still another historical error. Speaking of mathematical logic he says: "In recent years a new type of logic has arisen which has effected what amounts to a revolution in the subject. This, which is known specifically as Modern, or sometimes as Generalised Logic, dates from the publication, just before the war, of a celebrated work entitled *Principia Mathematica*, by Prof. Whitehead and Bertrand Russell" (pp. 127-128). Although *Principia Mathematica* was obviously of great importance in the development of exact logic, it is quite wrong to ignore the work of Boole, Peirce, Schröder and Peano (to mention no others). Of course, it was not necessary for Dr. Joad to mention these authors, but he need not have misrepresented the position of *Principia Mathematica*.

On Part II. little need be said, except that it forms an adequate introduction to the topics dealt with. Some people might be inclined to say that "Substance" is given too little space in comparison with "Change". Hume's theory of substance, and the modern developments from it, are hardly touched upon, although they are among the most interesting discoveries of modern philosophy. There is yet another mistake in history when Dr. Joad writes: "Let us suppose that, following Spinoza, we affirm not only that the universe is an all-inclusive Substance, but that this Substance is identifiable with a personal spiritual God" (p. 176). Dr. Joad is mistaken if he means to assert that Spinoza believed in "a personal spiritual God".

Part III. on "Constructive Metaphysics", is the longest and most varied in the book. Detailed comment on it is, therefore, out of the question. I was especially interested by chap. xvii., on Dialectical Materialism, and chap. xx., on the philosophy of Whitehead. These are chapters which will certainly stimulate intelligent students to further thought and reading. In the difficult and thankless task

of giving a popular exposition of the Kantian philosophy, Dr. Joad is on the whole successful, but he gives the false impression that Kant's belief in a transcendental self was based solely on ethical considerations, and he makes no mention of the extremely fruitful notion of the Ideas of Reason. The "Outline of Hegel's Philosophy" is very *Anglo-Hegelian* in its tendency, but this is justified in a book intended for beginners. It is difficult to understand, however, why *Knowledge and Reality* should be the only book by Bosanquet recommended in the bibliography. For (a) it is out of print and extremely difficult to obtain, (b) it is mainly a detailed and dull criticism of the first edition of Bradley's *Principles of Logic*, and (c) Bosanquet's views can be more easily understood from his *Principle of Individuality and Value*.

I have already commented upon a tendency to make slight errors in the history of philosophy. In a book intended for beginners and mainly concerned with the *problems* of philosophy, these mistakes may not be very important. It remains nevertheless true that accuracy is preferable to inaccuracy, and that a number of trifling mistakes do constitute a blemish upon an otherwise good book. Occasionally, moreover, Dr. Joad's good sense has deserted him. On page 302, for example, he writes: "In *The Problems of Philosophy* Bertrand Russell postulates independent universals, not only for substances, adjectives and relations, but for verbs and prepositions". This is a shocking confusion. Again, on page 316 there is a section headed "The Modern Atom", nor is this an intentional joke, for later in the book, on page 528, we are referred to "modern matter". And the following statement is extremely odd. "What does Professor Whitehead mean by that?" There is no question which is so frequently asked by contemporary philosophers; none which it is more difficult to answer" (p. 559). Such a grisly picture of the behaviour of "contemporary philosophers" should not be allowed to intrude into a book which may be read by beginners with a sense of humour. On the other hand, Dr. Joad often succeeds in stating a philosophical position with great neatness and point, as when, for example, on page 481, he describes in these words the Marxist theory about the relation of political and legal ideas to the economic structure of society: "They are at once its product, its prop, and its mirror . . .". And on page 421 a very lively analogy is drawn between a Hegelian philosopher and a detective. In general, the book is written with clarity and vigour of style.

It owes much to Russell's *Problems of Philosophy*. This is a good influence to fall under, but Dr. Joad hardly takes sufficient account of the very important advances in empiricist theories and in the philosophy of science which have taken place since the appearance of that work. Like Mr. Russell, he commences his introduction to philosophy with reflections on the possible non-existence of the material world. I am not at all sure that this is the best means of approach. Ethical and theological questions provide a more stimu-

lating and even a more sensible approach to philosophical problems, and most people who manifest an interest in philosophy are interested, at least to begin with, in right and wrong, God, immortality, and similar topics. Whereas they might regard doubts as to the existence of the material world as merely silly. Another mode of introduction would be to ask the question whether empirical science could, in principle, tell us all that there is to know about the universe. Such an approach would be more in touch with contemporary discussions than Dr. Joad's is, but would require a fuller account of scientific method than he provides. After all, it is at first sight plausible to hold that physicists, chemists, biologists and sociologists can tell us more about the world, by their methods, than the philosopher can by sitting in his much discussed armchair. In order to rebut this view, if it can be rebutted, a full discussion of scientific method is required.

However, it is hardly fair to criticise Dr. Joad for not writing a completely different book. For there are good precedents for this one. Furthermore, the work of popularising the researches of specialists is of great social value at the present stage of human society, and those who attempt this difficult task should be encouraged. My criticism of Dr. Joad as a populariser is that he ignores some of the philosophical specialists who are making the deepest impression at the present day. The best popularisers of physics and biology do not ignore recent developments, and there is no reason why a populariser of philosophy should do so either. It would be foolish to suggest, however, that Dr. Joad does not possess in a high degree the gift of making difficult subjects interesting and comprehensible to people of average education and intelligence. If my criticisms are justified, clearly this *Guide to Philosophy* could be improved on. But nevertheless I do not know of any single work of the same scope which could be recommended in preference to it.

H. B. ACTON.

VIII.—NEW BOOKS.

Charakter, Leiden und Heilung. By FRITZ KÜNKEL. Leipzig: Verlag S. Hirzel, 1934. Pp. viii, 235. M. 5.

THIS is one of a series of books by the author, a psychotherapist, which all deal with the application of synthetic or dialectic characterology. His work deserves to be far better known in England than it seems to be. It has the distinction, rare amongst treatises on insanity or near-insanity, of having an eminently sane conception of sanity. It is of manifold interest, not only to the psychotherapist, to whom it offers a new and fruitful development of Individual Psychology, but also to the ordinary psychologist, to the ethical philosopher, the metaphysician and theologian, since in the notion of "subject" it applies and verifies the concepts of unitary personality, of substance and of spirit. Indeed all these, the psychologist, the ethical philosopher, the metaphysician and theologian, should, according to the author, co-operate in or with the psychiatrist. Last but not least, although it deals with an eminently technical and controversial theme and is well stocked with carefully described cases, this book, like some of the others of the series which I have read, is by its simplicity and clarity excellently adapted for the man in the street.

The "subject", unnameable and ungraspable like God, is man *qua* decider or chooser. He is not the "soul", or *res cogitans* alongside *res extensa*, nor the body, but the unity beyond these (which are not to be conceived of as substances). This unity "answers" its environment in physical, psychical or psycho-physical ways. The answer constitutes subjectal or vital dialectic, of which the subject's needs or ends are the thesis, his passivity to the pressure of his inner or outer world is the antithesis, and his creative or positive dealing with this pressure is the synthesis, while his negative dealing (mere submission or avoidance) is the catathesis. There are degrees of subjectivity or livingness or wakefulness, by no means identical with degrees of physical health, nor necessarily conditioned by affections of the organs, but shown in different degrees of freshness, spiritedness, decisiveness, calm, clearness, mastery, creativity, adaptability or plasticity, and of their opposites, which are catatheses. Catatheses are affections, not of the "body" nor of the "soul", but of the subject. They are unhealthy, unlike rest, fatigue, sleep, old age and death, which are limitations of subjectivity forming parts of a living rhythm. Going from bad to worse they are: psycho-scleroses, neuroses and psychoses. Psychosclerosis characterises in different degrees all of us. It is a hardening or petrification, a limitation of infinite life (of thought, perception, feeling, ends, means, actions), a replacement of newness, plasticity and venturesomeness by automatism, fascination, hypnosis, fixation. It is effected through *Dressate* ("tricks") which work like laws of nature, whose formula is "I must" or "I must not" or "I cannot", and whose sanction is "Or else I perish". Its cause is anxiety or fear (of death, or of life and therefore of newness) and its purpose is to keep the subject far from his actual danger zone. This fear originates in the pre-

mature or maladroitness breaking up of the primitive "we" or polyccephalic subject (child + mother or family) with which each of us starts, and it leads to the avoidance of some activities, the compensatory exaggeration of others, and the setting up of unreal claims and needs, all of which form a narrow, fictitious ego, a fetish, marionette or mask, a thing-like ego hiding the real subject and confronting a "you" which it treats or fights as another thing and towards which it is always pursuing a prestige policy. The ruin of the "we" relationship entails the warping of the "it" relationship or of the attitude to the object (outer and inner): there is flight from the object in indifference, or apathy, or else compensatory flight from persons to objects in being engrossed by business, scholarship, etc. In support of his policy the psychosclerotic develops weapons, physical (blushing or heart-beating) or psychical (unrest). These in time lose their purpose and become automatic and dangerous to the owner, who struggles against them. They are then "neurotic" symptoms (neurotic vomiting, asthma, cough, insomnia, amnesia, stammer, heart neurosis, neuralgia, intestine disturbances, blushing and erythrophobia, impotence and frigidity—all in function neuroses), *i.e.*, completely rigidified function forms. Symptoms are the outer expression of neurosis. Neurosis is war developing within psychosclerosis or war against the original weapons of the latter, a war protracted because the patient wants to surrender, or be cured of, the symptom only, but not his rigidity or his fear of life. The basis of all neurosis is anxiety neurosis, a fear which is very remote from its original cause, is also a fear of fear and is aroused by a vast variety of situations. When it is aroused only by a definite class of objects and irrespective of the total situation it is a phobia (*e.g.*, claustrophobia or agoraphobia); that object then symbolises all danger or defeat or — 100. Secondary to phobias, positive only in appearance, and in reality mere compensations for the anxiety neurosis, are the manias (morphinomania, kleptomania, alcoholism, onanism, etc.), in which one kind of object becomes the sole symbol of all superiority or of + 100. From these partial neuroses we pass to complete neurosis (hysteria for extraverts and compulsion neurosis for introverts), describable as generalised function neurosis, in which the whole man is a symptom and all his behaviour is a struggle with symptoms which is designed to leave no time for real living. In the hysteric struggle against the outer world this world passes directly through the patient, who has no inner life or principle, into extravagant bodily expressions of emotions, and, while seeking omnipotence and complete autonomy, he becomes the slave of the feeling and judgment of those about him. In compulsion neurosis the introvert's struggle against his own inner world (his fears and his "worse" or "lower" self) has led, by means of vows, penances, sanctions, rituals and magic placations, to the ousting of reality by a system of compulsions. With the presence of organ affections we pass from character pathology proper to the psychotic sphere. (But it is to be noted that we all suffer more or less from organ disturbances, that psychotic disturbances are character disturbances and are, together with their attendant organ affections, often psychogenic; also that character affections often condition organ affections). First there are the psychopathies (*e.g.*, the preponderance of emotion over thought originally occasioned by the physical conditions of puberty; the vagabondage, stealing or excessive eating or drinking of young men; any strong impulses or one-sided interest); here the subject becomes identified with this or that function (generally through non-fulfilment of the latter) and the distinction from function neurosis lies in the absence of an ego-mask (there is no part to play, no prestige policy).

In the psychotic state (e.g., fright psychosis caused by shock, or poisoning as in delirium tremens), which is a partial and temporary psychosis, the individual subject retires from the object (fiction becomes fact) and from its body (which carries on like that of the animals or vegetables) as in sleep, and the cure is a kind of awaking. Full psychosis is melancholia for extraverts and schizophrenia for introverts. The first is an attempt to get away from the outer world even by doing away with the subject. Manic depression is to be described as melancholia: the mania is the attempt to replace the — 100 world by an imaginary + 100 world; but as the — 100 world reasserts itself the patient tries to get away from object by the destruction of the subject (depression). In schizophrenia the patient's attempt to get away from his own inner life results in the disappearance of all unity of decision, and the strife of opposite tendencies for simultaneous realisation brings about a terrible void. In the end he is merely a walking corpse. In the therapeutic part of his work, the author treats of dream analysis, narration of the past, suggestion, transference and the patient's oppositions, on fairly familiar lines. Yet he makes it clear that psychotherapy is ultimately the art of friendship and of spiritual direction, and distinctive of him are his notion of cure by a group, in a group and for the group, and his idea of the goal to be reached which is determined by his philosophy of the "subject". The cure is to be effected by a group comprising *inter alios*, a physician, neurologist, teachers of music, dancing, breathing, physical training, a theologian, etc., and the patient is to be trained in a group for group life. It is to be not of symptoms but of the whole man or subject; it is a "mutation" of personality, a change from the "I am all and there is nothing outside me" to "I am nothing and God is all", a pilgrimage from the primitive "we" through the pathological "we" to the true, free and maturing we (the Pauline "we" who are "members of one another").

Thus Herr Künkel's book is far more than a medical treatise; by implication at least it is a whole philosophy of life and indeed a bible: it deals not merely with *Seelen-heilkunde* but also with *Seelenheil-kunde*. We might criticise him for trying to derive all psychosclerosis, neurosis and psychosis from fear, and that too biological fear or fear of death, and ask whether the ambition for omnipotence is not primary; but he might answer that he writes primarily of the German, at the widest of the Nordic, psyche (cf. p. iv). A more relevant criticism will emerge from a significant comparison. In his looking to the fundamentals of Christianity for a cure, in his emphasis on the group and on life-changing or character-changing, also in his whole *Lebensanschauung* Herr Künkel resembles very closely indeed the Oxford Group. But the latter makes prayer and meditation or quiet central and through it brings the psychosclerotic (i.e., the so-called "normal" man) into touch with the Giver or Source of infinite life, plasticity and newness; as soon as this contact is made he becomes an active member of the group, a giver and healer. Herr Künkel on the other hand does, indeed, deal with meditation and prayer, but inadequately, making them merely co-ordinate to such things as training in breathing. He does not show how the patient is to be brought directly to infinite life, how he is to become anything more than a parasite on the life which the group already has, nor how this group life is itself to be saved from psychosclerosis and to be constantly renewed or re-created. When he does show us this, his deepest desire will have been realised and his *Seelen-heilkunde* will really have become *Seelenheil-kunde*.

PHILIP LEON.

Opera hactenus inedita R. Baconi, Fasc. XIII: Questiones supra libros octo Physicorum Aristotelis. Nunc primum edidit Ferdinand M. Delorme, collaborante Robert Steele. Oxonii, e Typographeo Clarendoniano, Londini apud Humphredum Milford. MCMXXXV. Pp. xxxix, 439. 30s.

WITH this bulky volume Messrs. Steele and Delorme at last bring to an end their arduous task of transcribing and printing the contents of the Amiens MS. of Roger Bacon. The first impulse of a reviewer whose business it has been to read the whole series of the 13 Fasciculi embodying the result of this labour is to congratulate the editors on what must, even to a loyal Minorite like Fr. Delorme, have been in many ways a weary and exhausting undertaking. The Amiens MS., as any one who has ever seen photographs of it will know, is minutely written; as its editors must be well aware, it is also in many ways a careless transcript. And it cannot be pretended that the intrinsic interest of the contents is always very absorbing. If the present reviewer has sometimes been led to dwell at some length on the apparent defects still to be found in the printed work, he trusts that it will not be supposed that he is not fully alive to the amount of labour that the mere transcription and correction of so many of the obvious errors which disfigure it has imposed on the editors, or ungrateful for their zealous industry.

I do not think that the publication of this very lengthy set of *Questiones* on the *Physics* will really do much to sustain the exaggerated reputation enjoyed by Roger with certain nineteenth-century writers who seem in fact to have known little of his writings, most of which were at the time unpublished, and less of those of such famous contemporaries as St. Thomas or St. Albert the Great. It is true that at times the native ingenuity of the *Doctor Mirabilis* throws into strong relief some of those fundamental inconsistencies and vacillations in Aristotle's cosmological views which have recently been well and forcibly dwelt on in the Provost of Oriel's elaborate edition of the *Physics*. But there seems to be no serious attempt to meet any of the difficulties which Roger himself indicates; his ambition extends to nothing further than the saving of Aristotle's face by the drawing of the kind of 'frigid' logical distinctions denounced by his later namesake the Chancellor Bacon. That a statement of Aristotle should ever, in fact, be an error seems to be a thought beyond the reach of Roger's soul; *dicit Aristoteles in litera* is apparently regarded as always a sufficient guarantee of truth; the business of the expositor is at best to justify his authority in the face of apparently unanswerable objections by some piece of a too often merely verbal logic, never to correct him. And it is, unfortunately, often enough a badly misunderstood Aristotle who is the object of the defence, an Aristotle who is, for example, simply assumed without evidence to agree with Christian dogma in believing in the creation of the world 'from nothing' at a not very remote date in the past, and the coming cessation of the cosmic motions 'after the Day of Doom'. Above all—though this is partly, no doubt, a defect inherent in the whole method of treatment of the subject by the method of *Questiones*, there is no trace anywhere of any attempt at the kind of synoptic exhibition of Aristotle's conception of his subject-matter as a whole which is characteristic of the great commentaries of St. Thomas, such, for example, as those on the *de Anima* and the *Ethics*. Nor is there anywhere in the work any serious appeal to the observed course of nature, such as would be expected by readers who have heard that the expositor is supposed to be distinguished

among his contemporaries by his zeal for *scientia experimentalis*. The truth is, I think, that with all his talk in the *Opus Maius* about "experiment", Roger believes in the infallibility of Aristotle in a way in which neither St. Albert nor St. Thomas dreamed of doing, and that this is a direct consequence of his unfortunate "illuminationist" notion of natural science as the object of a divine revelation to the patriarchs, prophets, and philosophers of the past. This "illuminationism" definitely marks Roger as a "mediævalist" of the kind from whom St. Thomas justifiably distinguishes himself when he writes of *nos moderni*.

It has occurred to me forcibly in reading this lengthy work that perhaps the last word has not yet been said on the real reason of the unprogressiveness of men's knowledge of the natural world in the thirteenth century. One would have expected a different result from the intellectual shock of the recovery of the complete work of Aristotle. The more one appreciates the contention of Prof. Gilson that the rediscovery of the complete Aristotle gave the world a charter of intellectual emancipation, where nature is concerned, from the old bondage to 'revelation', the more one would tend to anticipate a rapid forward movement. Yet the movement did not, in fact, come until the bankruptcy of the Aristotelian dynamics was made patent by the scientific Ockhamists of the fourteenth century, and there must have been some reason for this delay. Why was not the weakness of Aristotle in this respect discovered sooner? I can hardly think that it is sufficient to dwell on the insufficiency of "sense" as a guide to knowledge of natural processes, since, after all, the Ockhamists had no better guide. Where the men of the thirteenth century seem to me to have failed is in a certain singular incuriosity about natural fact itself. And perhaps the very rediscovery of the complete Aristotle had something to do with this incuriosity. His works disclosed a vast range of facts of which the earlier Middle Ages had been unaware, and there was the liveliest interest in fitting these facts, or supposed facts, into a coherent intellectual scheme, and eliminating apparent contradictions between them. What does not seem to have occurred to any one is that many of these supposed new facts might not be genuine facts at all, and that there remained such a vast field of other facts to take into account of which Aristotle had known nothing. Every one was driven to the consideration that there was endless work to be done in adequately "explaining" the mass of real or supposed facts disclosed by Aristotle; no one, as yet, seems to have felt any serious doubt that the "facts" to be coherently explained had once for all been completely and correctly envisaged by Aristotle himself. "Abstract rationality", insufficiently dosed with "brute fact", was the great intellectual defect of the age. Roger's zeal for "experimental science" must not mislead us here. What he was really anxious for was not the discovery of facts which could furnish a new and better basis for explanatory theory; that was assumed to be sufficiently provided for already in the works of Aristotle. All that Roger really wanted to add was a number of ingenious practical inventions which might expose and confound the sorceries of the Antichrist whose advent he was expecting. His interest was in 'fruit-bearing', not in 'light-bringing', experiment.

With regard to the text of the present volume, I have to say in principle only what I have said about some of its precursors. The Amiens MS. is clearly very carelessly written and needs a good deal of correction before the true sense of many passages can be recovered. Apart from other incidental inaccuracies it suffers badly from such standing sources of error as dittographies, omissions or insertions of *non* in wrong places,

confusions of *natura* and *materia* and the like. Many of these errors have been removed in the process of editing, which has, I think, been done more thoroughly here than in most of the earlier *Fasciculi*. But I have noted a good many more which the reader will need to make for himself. I will just mention a few of these as examples. P. 3, 10, *est* in *non* genere. Omit *non* here, and insert it in l. 12 before *communicant*. 4, 13, *abire* in infinitum in *causari*, l. in *causis*. 6, 23, secundum quod magis sensibile, l. secundum magis sensibile ("magis sensibile in the second sense"). 17, 20-21, sicut . . . voluntarius. Place the clause in l. 18 above, after *dupliciter*. 25, 5, hoc verbum, l. hoc verbum <est.> 29, 32, sub positione alicujus, l. sine suppositione alicujus. 32, 7, particulare, l. universale. 36, 7, invicem, l. invicem <feri.> 36, 37, positionem, l. potentiam. 42, 12, qualitas et quantitas. Add <non sunt principia coequeva.> 42, 35, medius, l. melius. 51, 29, scilicet, l. si. 52, 21, tertium, l. terminum. 61, 14, forma rei supra materiam, l. forma rei <addit> supra materiam. 64, 34, immo moriundo, l. immo oriundo. 67, 13, minores, l. motores. 72, 27, causaliter, l. causaliter <et predicabiliter.> 76, 7, scilicet, l. si. 78, 25, 28, communis, l. communius (bis). 79, 37, quod sic, l. quod non. 83, 9, 32, natura, naturam, l. materia, materiam. 83, 22, complete creare, l. complere. 85, 33, natura, l. materia. 102, 27, for minus l. materia (cf. 102, 3); 102, 28 for intra dicitur l. inducitur. 117, 17, magis dicunt fieri, l. magis dicuntur fieri. 127, 2, either delete the *non*, or for secundum l. preter. 133, 33, continuatur esse divinum, l. continuatur essendi. 151, 9, excepta, l. accepta. 152, 4, infinita, l. finita. 152, 23, finito, l. <in>finito. 160, 9, secundo sensu, l. secundum sensum. 169, 10, natura, l. materia <nisi> (cf. 17 infra). 217, 2, anima est innobilis, l. anima est mobilis. 227, 13, rarefiant, l. <non> rarefiant (cf. 15 infra). 243, 11, condempnatio (MS. rarefactio), l. rarefactione <et condempnatione>. 261, 8, est ejus subjectum, l. <motus> est ejus subjectum. 284, 12, dexametrum, l. diametrum. 290, 21, generatione, l. genere. 294, 18, per naturam, l. per creationem (cf. infra). 329, 8, 12 omit the inserted *infinita* and *infinitem*. (The meaning is that 'line' and 'terminated line' are convertible terms.) 355, 15, movere aliam, l. moralium. 358, 5, per materiam, l. preter materiam. 385, 26, aut quando, quando, l. aliquando. 392, 13, morabit, l. mensurabitur. 393, 6, tempore, l. eternitate. 400, 27, jam est, l. non est. 400, 34-35, secundum materiam gravis, Qy set materia gravis. 413, 33, est causa, l. <non> est causa. 411, 16, secundum se; consideratio, l. secundum se considerata. 417, 20, dele non. 427, 27, moveretur, l. moveret. I could have given a much larger list of certain or nearly certain corrections, but this will perhaps suffice.

A. E. TAYLOR

Studies in Philosophy. By G. C. FIELD. Bristol: Arrowsmith, 1935. Pp. 250. 10s. 6d. net. (University of Bristol Studies No. 3.)

PROF. FIELD'S new book is a reprint of twelve papers contributed during the last fifteen years to philosophical meetings and periodicals. The earliest papers in the collection belong to 1921 and 1922 and are concerned with psychology. They are constructively critical in character, aimed at clearing up certain obscurities in the psychologists' use of the concepts 'instinct' and 'unconscious'. Another group, consisting of four papers belonging to the years 1930 to 1932, deals with ethical problems. The subjects are—the reality of moral progress, Kant's first moral principle, the place of definition in ethics, and the value of ethical and political philosophy in

practice. Three papers treat of ancient Greek philosophy, two of them in relation to modern science: the other is the article on Plato which appeared in the series on 'Great Thinkers' contributed to *Philosophy*. There remain two articles which may perhaps be classed as metaphysical: 'Some Modern Proofs of the Existence of God' (1928), and last session's Presidential Address to the Aristotelian Society, expounding the conception of philosophy as 'the Examination of Assumptions'.

In one of the ethical papers Mr. Field warns his readers against the danger of prematurely constructing systems. This is emphatically not a danger to which he is himself exposed. His natural bent is critical, cautious, somewhat sceptical. That empiricism of method which is characteristic of the English tradition is deeply ingrained in him. The philosopher, in his view, requires (again the immediate reference is to moral philosophy) not so much "the logical virtues, a sense of form and system, a passion for coherence and self-consistency, a love of precise definition, a keen eye for fine distinctions of meaning" as "a good nose for facts", or something analogous to that scientific gift. The logical virtues are virtues and are valuable to a philosopher, but they are not enough; for philosophy is a reflection on experience and a criticism of assumptions, 'and an instrument, however sharp, is of no value unless there is something to cut with it'. If the choice had to be made, the reader feels that Mr. Field would regard it as more important to get everything in, at the risk of some disorder, than to frame a neat symmetrical scheme at the cost of considerable exclusions. This is perhaps part of what he has in mind when he says that 'it is possible . . . to insist on exactness and consistency inopportunistically at the wrong time or the wrong place'.

This attitude and temper of mind is seen at its best and most effective within the present volume in the ethical papers, especially in the paper on Kant and in the one on definition in ethics, from which the foregoing quotations come. Mr. Field finds himself involved inevitably in controversy with those of his colleagues, like Mr. Ross and Prof. Moore, whose ideas of philosophic method diverge from his; but he is patient and understanding with them, and rejects the frontal attack normally in favour of a threat to the flanks of their positions. But controversy is not primary in these papers: it is only incidental. The main object of them all is to clear up current confusions, to guard against possible misapprehensions, in the use of important terms. Thus they are addressed in the first instance rather to the educated public than to the professional philosopher, and they are written in the pleasant and easy style which befits this address.

There is a certain element of paradox in the fact that a thinker with this natural bent and disposition should be so deeply attached to Plato. Mr. Field opens his excellent brief sketch of Platonism by asserting his 'supreme greatness'; 'probably', he adds, 'the greatest thinker of all ages'. This may be true, though such relative judgments have, as Mr. Field would no doubt agree, little substance; but to how much of Platonism can Mr. Field really *ex animo* subscribe? He is no mathematician and has not followed Plato's prescription that a long period of exclusive devotion to the mathematical sciences should precede any attempt at the metaphysical problem. In this region he can only endorse, as it were, from outside the pre-occupation of modern theoretical science with quantity as some confirmation of the truth of the Platonic thesis. And for the rest, though no critic is fairer or more open-minded in his treatment of the detailed evidence, in the general statements of Platonic doctrine one notices a slight but unmistakable tendency to minimise those features of

it which are most at variance with modern empiricism. The transcendentalism, which was to Aristotle a stone of stumbling, tends to disappear; the mysticism, which was so cardinal for the neo-Platonists, if not denied outright, is reduced to insignificance; the provocative challenges to contemporary empiricism, which are a constant feature of the dialogues, are corrected into protests against an untenable exaggeration. The paradox above mentioned is diminished for the reader as the result of all this, but only, I would suggest, at some cost of historical accuracy.

But any such criticism, even if it is judged to be justified, rests on a very slender basis. Prof. Field is one of the fairest and most judicious of critics, and these fruits of his critical activities show all the sanity and balance of judgment which we expect from him. They were well worthy of preservation in more permanent form, and should find a welcome from a wide circle of readers.

J. L. STOCKS.

An Examination of Examinations, being a Summary of Investigations on the Comparison of Marks allotted to Examination Scripts by Independent Examiners and Boards of Examiners, together with a Section on a Viva Voce Examination. By SIR PHILIP HARTOG, K.B.E., and E. C. RHODES, D.Sc., Reader in Statistics in the University of London. London, 1935. Macmillan & Co. Pp. 81. 1s.

This little pamphlet is the first fruit of an International Institute Examinations Enquiry, initiated under the auspices of the Carnegie Corporation (who paid the expenses) in 1931, which is now being prosecuted in England, France, Germany, Scotland, and U.S.A. Within its brief compass it contains more high explosive than any publication I can remember, and when the Enquiry is completed it seems likely to shatter the intellectual claims of all the examination-systems in existence. The English Committee which has achieved this was composed of Sir Michael Sadler (Chairman), Dr. P. B. Ballard, Dr. C. Delisle Burns, Prof. C. Bart, Sir Philip Hartog (Director), Sir Percy Nunn, Prof. Spearman, Prof. Graham Wallas, Prof. Godfrey Thomson, Prof. H. R. Hamley and Prof. C. W. Valentine. The other countries had equally representative committees, and there can be no doubt that they have performed an important public service. For though every conscientious examiner has probably often been assailed by doubts whether his results were valid and his activities worth while, and has had to suppress his doubts, or to make a story of them, as I did in my essay on 'the Psychology of Examinations'¹, it is quite another matter when such doubts are officially investigated and confirmed, and apparently proved up to the hilt after solemn and sober inquiry.

Specifically it is here shown that not only do different examiners adopt different standards in marking Papers, but that they are liable to random deviations from these standards, and when asked to re-mark after an interval of from 12 to 19 months, they change their marks. Thus (p. 14-5) 15 School Certificate History Papers, to all of which the same 'middling' mark had been allotted, were submitted to 15 experienced independent examiners who were asked both to mark them numerically and to say whether they passed, failed, or deserved 'credit'. The result was that the 15 awarded 43 different marks varying from 21 to 70 (out of 96). In the subsequent re-marking 44 varieties were scored, ranging from 16 to 71,

¹ In *Must Philosophers Disagree?* ch. ii.

and in one case there was a difference of 30 between the two marks of the same examiner! Only one of the examiners was steady enough not to change his marks more than 7 per cent.: the rest must have learnt (or forgotten) a lot of history in the interval.

Similarly, in 15 School Certificate Latin Papers, which had all originally the same mark, 28 different marks were given by 7 examiners, ranging from 28 to 55. In the School Certificate English Essay, one candidate got 28 from one examiner and 80 from another (out of 100), and the nearest approach to unanimity was a candidate whom 6 examiners ploughed; but the seventh gave him a 'credit'. The arithmetic Paper Part A promised to uphold the reputation of mathematics for exactness; it produced a range of variation between the examiners of only 2 per cent. But then Part A consisted entirely of straightforward calculations: as soon as 'problems' were included, in Part B, the variations rose to 14.7 per cent. College Entrance Scholarship Examinations and University Honours Examinations in Mathematics and History yielded similar results. The subjects in which examiners disagreed least, and therefore presumably examined best, were School Certificate Latin and French, while they differed most in Honours History (p. 56). Fortunately for the credit of English philosophers their marks were not inquired into; but a short appendix on the results of the French *Baccalauréat* reveals that the correlation between the marks of two philosophy examiners was only 0.112 (p. 81). In other respects the French Committee encountered the same situation as the English. Thus 3 Essays, which had all received 36 marks (out of 80), on re-marking by 76 examiners, scored, from 4 to 52, from 12 to 64, and from 16 to 56! Lastly, the personal interview and *viva voce* of the candidates, such as is believed to be practised successfully in the Civil Service Examination, is declared to be 'unreliable' (p. 37-9), for the reason (*inter alia*) that the candidate put first by Board I was put thirteenth by Board II, while Board II's No. 1 was placed eleventh by Board I.

Now what is the meaning of this amazing 'contingency' of examinations? The conditions were more conducive to good examining than those of the actual examinations. Competent examiners were chosen: they were adequately paid, and not hurried (p. 13). I can only suggest that in the construction of fair and adequate examinations nothing like enough attention has been paid to psychological factors, and that objective 'exactness' is very much of an *ignis fatuus*. I cannot imagine how the latter ideal can be attained by anything short of the American *Yes-No* questions, and these are open to the objection that they make the setter of the questions do the real work. If, as seems likely, this Enquiry yields the same results everywhere, it will be very interesting to watch its effects on the public mind and institutions. At the very least it should yield an instructive object-lesson on the power of vested interests!

F. C. S. SCHILLER.

Vernunft und Existenz. By KARL JASPERS. Groningen: J. B. Wolters, 1935. Pp. 115. F. 2.25.

THIS is a very difficult book to understand. Prof. Jaspers has attempted the task of indicating, in five lectures, the nature of the point of view which he developed in the three volumes of his *Philosophie*. The English reader would be well advised, I think, to read the section on Jaspers in Dr. Brock's *Contemporary German Philosophy*, before he attempts to read *Vernunft und Existenz*. Even then he may well be baffled by the book's

obscurity. Since I should not claim to understand the book as a whole, I must content myself with mentioning some of its contents more or less at random. (i) Jaspers is of the opinion that Kierkegaard and Nietzsche are "the truly great thinkers of their age" (p. 5). They mark the end of an epoch of thought. They were both concerned with the question of man's destiny. "To understand one's self is to them the road to truth" (p. 13). They understood the characteristics of their age better than anyone else, and felt themselves different from their fellows. Their attitude towards reason and towards the self has greatly influenced modern thought. (ii) The scientific view of the world is criticised as necessarily incomplete. This again, apparently, is a point of view which we inherit from Kierkegaard and Nietzsche. (iii) Owing to the incompleteness of all scientific knowledge, we are driven on to seek out what the self and what the Whole *really* are. The argument is somewhat reminiscent of Bosanquet, although, of course, there is no influence from that quarter. (iv) The world, consciousness, and spirit are all of them based in "Existenz". The author tries hard to explain what he means by "Existenz". "Existence only becomes clear through reason; reason only has content through existence" (p. 41). (v) Philosophy, according to Jaspers, is "unpolemical". It can only proceed in a positive manner, *i.e.*, by stating its position and waiting for the learner to appreciate the point of view. Argument and counter-argument will not secure philosophical insight. It would be impertinent to criticise a theory which I cannot claim to have mastered. But I believe that we are entitled to expect that a philosophical theory should be more clearly expressed than this one is. At least some definitions and examples could have been provided.

H. B. ACTON.

Transcendence and the Logical Difficulties of Transcendence. By BENT SCHULTZER. Copenhagen, Levin and Munksgaard; London, H. Milford, 1935. Pp. xv + 301. 12s. 6d.

SINCE a great part of the writings of famous philosophers was devoted to problems which may be grouped under the conception of transcendence, it is natural to turn eagerly to any work which offers an analysis of that conception. Dr. Schultzer's work is both satisfying and disappointing. It is satisfying in that he displays a grasp—not always met with just now—of the standpoint of speculative philosophy. Within this sphere he analyses the notion of transcendence and does so admirably. He wishes to unfold some of the sources of transcendence, point out their contradictory nature, and to observe that without these flaws no problems of transcendence would arise. Accordingly he examines *the idea of necessity*. After distinguishing different kinds of necessity—as exemplified in necessary judgments, necessary existents, and necessity-relations—he shows that the idea of necessity involves *the idea of totality*. With great lucidity he unfolds the antinomies implicit in these ideas—rightly assuming that transcendence and antinomies are intimately connected. The neatness of the exposition gives value to the work, for he expresses the conflicting sides of antinomies more clearly than, for example, either Kant or Bradley. That is to say, any student of speculative philosophy would benefit from reading some of Dr. Schultzer's earlier chapters.

With this Dr. Schultzer is unfortunately more or less content; and, in so far as the analysis of transcendence is an analysis only *within* the sphere of transcendent philosophy, the work is disappointing. No attempt is made

to define such words as "transcendence", "necessity", "totality", "sufficient reason". Logical analysts will not find that the difficulties with which such conceptions abound have been in the least removed.

The work could probably have been condensed with profit. The underlying idea is applied at length to too many examples. To prove his main point—that necessity-relations give rise to insoluble problems of transcendence—Dr. Schultzer cites many instances from historical philosophy. It is wise, no doubt, to illustrate in many fields the part played by this notion, but his chief contention could be seen from one or two examples by themselves: he is inclined to dot his i's. Again speculative philosophers might not consider that the work would promote speculative discovery; for it does not clarify in the sense of removing misleading features.

A word should be added about the translation, which was carried out by Miss Annie Fausbøll. If she is Danish, as one would infer from her name, she has a perfect knowledge of English idiom.

J. O. WISDOM.

Der Psychologismus im englischen Empirismus. By HANS PFEIL. Paderborn, F. Schöningh, 1934. Pp. 180. M. 4.80.

This book is one of the series *Forschungen zur neueren Philosophie und ihrer Geschichte*, edited by Prof. Meyer. *Psychologismus* is first defined provisionally as "the attempt to solve by psychological means problems which fall outside psychology",¹ and later as "regarded negatively, the total rejection of the logical sphere of thoughts and the ontological sphere of values, and, regarded positively, the process of the total psychologising (*Psychisierung*) of thoughts and values".² The authors treated are Bacon (to a lesser degree), Locke, Berkeley and Hume. No doubt the writer of the book would not regard any of these, with the possible exception of Hume, as intending to carry "Psychologismus" to its full extent but only as committing errors which lead in that direction.

There can be no doubt that the work is sound, clearly written and philosophically able. It does not, however, to a reader who is familiar with the authors concerned and a few of the chief discussions by others of their doctrines, convey any very novel or original matter. It is not therefore, a work which requires an extensive review, at least in an English periodical. It cannot, of course, either be regarded as a general outline, commentary, or even summary of the views of the authors with which it deals, since it professedly only treats them from one point of view, *i.e.*, with the sole intention of finding where they commit the philosophical error of "Psychologismus". Within his self-appointed limits the author handles his material well. In view of the course of present-day controversy both in Germany and in this country "Psychologismus" is certainly a burning topic, and it is useful to have a historical account of that tendency as at work in the school which has been specially associated with it, though the author is perhaps a little too convinced that the tendency is hopelessly wrong to be ideally the best person to write its history. Nor has he achieved what is perhaps indeed almost impossible and written a book on one tendency in a set of authors without conveying at times the impression by omission that it is a more important factor in their teaching even than it is. In this connection it is a great pity that he did not pay more attention to Locke's positive account of *a priori* knowledge as a study of synthetic

¹ P. 2.

² P. 15.

connections between our ideas in a quite "non-sensible" sense of "idea". The work should have been provided with an index.

A. C. EWING.

Immanuel Kant on Philosophy in General. Translated, with four introductory essays, by HUMAYAN KABIR. Calcutta, University Press, 1935. Pp. cl, 90. Rs. 5, 9s.

While it would certainly be an exaggeration to describe *Ueber Philosophie überhaupt* as one of the most important works of Kant or as providing much that could not be found elsewhere in his philosophy, it is very desirable that there should be an English translation and there is no doubt that attention to it will make some parts more clear than they otherwise would be. The work was originally written by Kant as an introduction to the *Critique of Judgment* but never published, and it cannot be understood except in conjunction with the *Critique of Judgment* itself.

In addition to the translation Mr. Kabir has provided us with a set of introductory essays. They seem to me to show great ability, and I hope sincerely they may be the prelude to a larger work on Kant some time in the future. The author is on the whole in line with the views recently put forward by the Master of Balliol. *E.g.*, he insists that "the categories do not create or originate the objects of our experience, they only render our experience intelligible by distinguishing the factors in it which are due to our own activity from those which are not so dependent".¹ But he is distinctly original also in thought and statement and throws new light on several points in Kant. The main criticism I should bring against the introductory essays is that they tackle a far wider subject than can be managed in the space. As an introduction to the work translated they are not specific enough, while as an account of Kant's philosophy as a whole they are obviously inadequate, at least quantitatively. But this "falling between two stools" would have been almost impossible to avoid.

English readers of Kant should be very thankful for this, the first English translation of the work, and I admire Mr. Kabir's skill in splitting up the cumbrous German sentences so judiciously and with such a readable result. There are, however, a number of minor mistranslations. A serviceable summary both of the passage translated and of the other introduction to the *Critique of Judgment* is also provided.

A. C. EWING.

The Natural History of Mind. By A. D. RITCHIE, M.A. London: Longmans, Green and Co., 1936. Pp. 286. 15s. net.

THE chief theme of these Turner Lectures for 1935 seems to be the relation of physiology to psychology. The plan of the book is as follows: after an Introduction in which the main topics are touched upon, there is a chapter on Causation, followed by one on some general characteristics of the biological sciences. In this the author points out how difficult it is to avoid the use of certain words (usually called teleological) which do not occur in the non-biological sciences, and shows how little those who wish to avoid them, on the ground that they are unscientific, really succeed in doing so. This is followed by two chapters giving a very good account of the physiology of the nervous system, which may be strongly recommended

¹ P. lxxvii.

to anyone who wants a brief introductory survey of this subject. The next chapter, entitled "What does Psychology Study?", will disappoint any reader who looks for a cut and dried answer. The author touches upon most of the important points, but does not give a detailed analysis of any one of them. No one has yet succeeded in explaining why, if physiology and psychology are so closely related as they are supposed to be, the latter should use a language so different from that of the former, and why it should be so difficult to translate from one into the other. The last two chapters deal with cognition and emotion and thought. When so many topics are discussed in no more than 280 pages it is not to be expected that they will be treated in great detail, but Mr. Ritchie avoids personal axe-grinding and writes in a very readable style.

J. H. WOODGER.

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IX.—PHILOSOPHICAL PERIODICALS.

JOURNAL OF PHILOSOPHY. xxxii. [1935] 21. **R. Demos.** 'The Fundamental Conceptions of Plato's Metaphysics.' ["Usually an account of Plato's philosophy makes the theory of ideas central. This is not the position of this study. Not . . . that the theory of ideas is non-Platonic, nor even that it is not central in Plato's thought . . . the theory of ideas is part of a larger framework, which becomes clear in the later dialogues. . . . There is a unity in Plato's mind, more subtle, less obvious, than that of a logical system. It is the unity of an intellectual personality."] xxxii. 22. **A. G. Ramsperger.** 'Some Problems for the Relativist.' ["Experience begins by discriminating an object which we must assume to be the exhibition of an ultimate heterogeneity in nature capable of being exhibited to many observers. Nevertheless there is no reason to suppose that any imaginable character belongs to it except in relation to a conscious organism." Thinks that this view "is consonant with many of the positions taken by the pragmatists."] **B. Morris.** 'Metaphysics of Beauty.' [Argues against the tertiary-quality view that it cannot account for ugliness and that "beauty is describable and ultimately conceivable only in terms of a subject-object relationship." . . . "Beauty implies satisfaction. Satisfaction implies a mind, and when the mind is satisfied with its object, beauty comes into being." The aesthetic relation must however be differentiated from other subject-object relations.] **D. W. Gottshalk.** 'Beauty and Value.' ["Beauty is a value, a value that entities which possess other values are seen to have when these entities are taken . . . aesthetically." It "belongs primarily not to objects of art, but to the wide world of objects as humanized and spiritualized . . . as related to agents of desire who have in addition the desire aesthetically to behold them."] xxxii. 23. **E. A. Shearer.** 'Dewey's Aesthetic Theory, I.' [Concludes that "on some of the perennial issues of art theory and of art criticism (substance and form, art and morality, art and propaganda), he speaks with a mastery of the nature of the underlying confusions of thought and with a lucidity that should make it possible to bury these long-dead bones of contention."] **H. Miller.** 'The Relations of Physics and Biology to Epistemology.' [A vigorous appeal to philosophers to make biology rather than physics their model science. *E.g.*, "my thesis is that epistemological discussion must orient itself primarily to biological fact, and not to physical fact as it does now. . . . Let us make epistemology a branch of biology, instead of some sort of psychophysics! . . . All modern biologists, however violently they may deny the allegation, are vitalists in practice; for their practice invariably assumes that the organism may be intelligibly affected from within, but never from outside itself."] xxxii. 24. **G. D. Higginson.** 'Stimulus, Sensation, and Meaning.' [Holds that "psychology would be greatly clarified by discarding the notion of *stimulus* as a physical or chemical thing to which man responds. . . . It must start at a meaningful level. . . . Observation

is always meaningful; man always observes properties of objects." Yet "psychology has an incontestable claim if it will but stake it out and work it properly. By working at a meaningful level—not of physical stimulus and meaningless sensation—its products will be observable meaningful properties of situational things." **E. A. Shearer.** 'Dewey's *Æsthetic Theory*, II.' [Appreciative comment on *Art as Experience*, which concludes "he sets aside the trivial theories that would make art pleasure, or play, or wish fulfilment, as well as the equally trivial elevations of art into another world. For him art makes life better, but it does not make something better than life. Out of sense it builds 'the mighty world of eye and ear'."] xxxii. 25. **J. R. Kantor.** 'Man and Machine in Science.' [Attacks the growing reliance on machines and instruments, and points out that they cannot ultimately take the place of observation and reflection. "The thinker is prior to the machine," and "no technique, method or experiment can be better than the postulations and hypotheses which . . . are the foundations upon which they rest." For "facts are not fully-fashioned and completed things that one needs only to ensnare." The issue is whether "pointer reading is a substitute for thought and reflection."] Abstracts of the Papers to be read at the 35th Annual Meeting of the Eastern Division of the American Philosophical Association at Baltimore, December, 1935. xxxii. 26. **J. Dewey.** 'Peirce's Theory of Quality.' [Replies to Goudge's criticism of Peirce's conception of Firstness or (pure) quality in xxxii. 19, but admits that "in his analysis Peirce takes Firstness, or quality, in two aspects," and though he contends that Peirce "gives his reader explicit notice that this is just what he is doing," Dewey's quotations can hardly be said to make this clear. Peirce seems to preserve his reputation for 'Cimmerian darkness' substantially intact, and even Dewey does not think that he has "fully mastered" him. Nevertheless he feels quite sure that Peirce "above all modern philosophers has opened the road which permits a truly experiential philosophy to be developed."] **N. P. Stallknecht.** 'Subject and Object in *Æsthetics*.' [Comment on D. W. Gottshalk, xxxii. 22.] xxxiii. [1936] 1. **E. Nagel.** 'Impressions and Appraisals of Analytic Philosophy in Europe, I.' [Deals with Cambridge, and discusses G. E. Moore's notions of analysis, and L. Wittgenstein's esoteric doctrine developed since the *Tractatus Logico-Philosophicus*.] xxxiii. 2. **E. Nagel.** 'Impressions and Appraisals of Analytic Philosophy in Europe, II.' [Deals with the 'Vienna Circle,' and especially with Carnap, but abstains from discussing how far they have been influenced by American pragmatism. Finishes with a rather slight sketch of the Polish logicians, based on flying visits to Warsaw and Lwów.] xxxiii. 3. **E. Vivas.** 'The *Æsthetic Judgment*.' [Concludes that "the æsthetic judgment may lay claim to objectivity in two senses . . . in that it refers to qualities in the object, and also in that it refers to values residing as tertiary upon the secondary qualities of an object, for a group." Further "the criterion involved in objective judgments need only be logically *a priori*. To be applicable to actual objects it must have been derived empirically from the objects to which it refers."] **W. D. Oliver.** 'The Concept and the Thing'. [Takes the concept as "a *history* . . . not an exact and complete history of a thing", but "a selected account from which some events have been excluded by the limited nature of our sense-organs; still others by limitations in our interests and needs, and yet others out of lack of vigilance or out of our incapacity to observe all things at all times. The records have been further mutilated by faulty memory. . . . Concepts, as histories,

are subject to bias and narrowness of viewpoint. . . . The concept of a thing is a collection of (or from) all that we have experienced of that thing. . . . The object is the meaning of the concept . . . it is that which the concept *intends* . . . and it is that to which the content of the concept must conform".] xxxiii., 4. **B. W. Means.** 'Freedom, Indeterminacy, and Value.' [Science having become "a system which predicts what probably will happen", suggests at least three metaphysical interpretations, determinism, indeterminism and partial indeterminism. Concludes that "fundamentally our experience is a value-directive process, a development of the present for the sake of something, or ultimately for its own sake, intrinsic value and final good."] **C. J. Ducasse.** 'Mr. Collingwood on Philosophical Method.' [Severe criticism, condemning his rejection of technical language and pointing out that Collingwood fails to prove his contentions.] xxxiii., 5. **R. C. Baldwin.** 'Teleology and the Idea of Value.' [Shows that the attempts of L. J. Henderson, L. T. Hobhouse and B. Bosanquet to eliminate the notions of design and purpose are unsuccessful.] Abstracts of Papers read at the Twelfth Annual Meeting of the Pacific Division of the American Philosophical Association (at Stanford University, 26-28th Dec., 1935).

PHILOSOPHY OF SCIENCE, II. 4 (October, 1935). **J. R. Weinberg.** *Are There Ultimate Simples?* [An elaborate examination of Wittgenstein's "supposed demonstration of logical simples". The author claims that "the doctrine that ultimate simples exist" is necessary in Logical Positivism in order to "insure the completeness and uniqueness of any given analysis". For "if many distinct analyses were possible, or if there were no limit to a given analysis, then the theses of Logical Positivism could not be demonstrated. Even though a given analysis of propositions reduced them to propositions exclusively concerned with empirical reality, another possible analysis might very well lead to propositions which were not exclusively concerned with empirical reality. Similarly, if there were no ultimate limit to analysis, although a given analysis led solely to the empirical reality when carried out to any previously assigned point, further analysis beyond this point might reveal non-empirical reality." (But the position of Logical Positivism is that an analysis in terms of "non-empirical reality" would be meaningless. It is to be noted that Carnap's recent exposition in *Logische Syntax* explicitly rejects the notion of atomic propositions composed of simples.) The article proceeds to an interpretation of Wittgenstein's doctrine (nowhere explicitly stated in the paper) which convicts him of a *petitio principii*, and arrives at the conclusion that it may be impossible to define a 'fact'. (The frequent use of phrases which the Positivists would regard as metaphysical, e.g., 'ultimate simples exist', and to which it would be hard to attach any clear meaning, robs this literal-minded exegesis of Wittgenstein's *Tractatus* of much of its value.) **E. Kolman.** *On the Problem of a Unified Physical Theory of Matter.* [A loosely connected set of notes, condensed to the point of incomprehensibility, consisting of: (a) a comparison of "three kinds of regularities in their specific manifestations in physics: (1) interaction; (2) causality; and (3) functional dependence", (b) numerous references to papers on the "quantification of time", (c) sketch of a project to create a "unified physical theory of matter" involving discontinuous time but continuous space.] **N. Rashevsky.** *Outline of a Mathematical Theory of Human Relations.* [Further applications of a method used in previous papers in the same journal. On the basis of a physico-chemical interpretation of

psychological phenomena an attempt is made "to build up a mathematical system describing *possible* correlations between the individuals of a group, regardless of any counterpart of any such relations in reality; just like the various systems of geometry: Euclidean, Lobatshevsky's, Riemann's have been built up 'in abstracto', regardless of any applications to the physical universe". It is found possible to describe elementary social structures and relations on the basis of certain very general assumptions embodied in integral equations.] **J. Mayer.** *The Techniques, Basic Concepts, and Preconceptions of Science and Their Relation to Social Study.* [Long critical review of *Methods of Social Science* (edited by S. A. Rice, Chicago, 1931), a composite volume, "without question the most significant and authoritative attempt thus far made in the United States to ascertain important current methods and concepts in use in the social studies". Many interesting comments on the methodology of social study.] **H. Cairns.** *Law as a Social Science.* ["A science of law must be founded on an adequate theory of human society, and the construction of that theory is in part a task within the domain of the legal theorist. To-day . . . legal study does not exhibit the characteristics of a social science; it is a technology. By its emphasis on technological ideals it is overlooking a set of problems which must be solved before we have a fruitful theory of law or a sound applied legal science."] **L. Bloomfield.** *Linguistic Aspects of Science.* [Investigation, from a behaviourist standpoint, of the linguistic habits of science. Much confusion in the foundations of science is due to lack of linguistic information, which the writer seeks to remedy, in part, by discussion of the terms *not*, *cardinal numerals*, *vectors*, etc. Thus "a positive integer is by definition a word or phrase which has a definite place in the recitation of number-expressions (*one, two, three . . .*). We learn to begin this recitation by saying *one*; then we learn to recite up to *twelve*; we learn the place also of *hundred, thousand, million*. Other words have combinations which indicate their place in the recitation . . ." etc. (The linguist has undoubtedly contributions to make to the analysis of science, but the explicit analyses supplied are hard to judge in the absence of more detailed discussion of the relations, *e.g.*, between linguistics and logical analysis.) Discussion (Correspondence). Reviews and Notes.

III. 1 (Jan., 1936). **M. H. Moore.** *A Metaphysics of Design without Purpose.* [Design (treated as synonymous with order) is an idea which is a necessary basis for knowledge. But it need not be attached to teleological implications. "It is reasonable to believe that the order in nature, which makes knowledge possible, is both objective and independent of the nature of our mind, and also that there is no need for going beyond it to a purpose, or to a designer which explains it". For in support of the objectivity of natural order "it is very unlikely that the constancy of ordered relations is due simply to the constancy of our rational processes". (Is this a legitimate use of probability, by the way?) And the introduction of "extra-naturalistic" agents raises more questions than it explains. We set up the extra-natural to explain those features of the universe which our knowledge of nature cannot explain. But then the extra-natural is essentially unlike the natural and we are unable to imagine the relations between them. Again, if the designer "designs by nature" the problem is merely pushed a stage further back; if not, we have an infinite regress. While naturalism is limited by its ignorance, "it has no need to correct its inadequacy by a greater" and "it rests in the probable belief that if what is now unknown later becomes known, it can be dealt with in natural

categories".] **A. Lapan.** *On Space and Time as Attributes of Nature and Forms of Experience.* ["What can we say of space and time when we consider them as attributes of nature and as attributes of nature in the context of experience?" An examination of this question in the light of the opinions held by Locke and Kant leads to the conclusion that "space and time as attributes of nature and as attributes of nature in the context of experience are not at all the same thing. Both are attributes of nature; but the function of nature as an object of knowledge is not extended; and although this function is temporal, what we can say of it in that respect is not identical with what we can say of time when it is simply taken as an attribute of nature. Space is a form of nature (in or out of experience), but not of experience. Time is both a form of nature and a form of experience and the two are distinguishable." (As in other papers published in the journal the obscure and wilfully technical style adopted makes it difficult to report or criticise the arguments used).] **D. L. Miller.** *Things and Potentiality.* [Tries to show how the concept of thing "arises in our experience and to show what is implied in attributing aspects or characters such as colour, roundness, sweetness, and etc., to things, and to illustrate more clearly the meaning of potentiality from the experiential view of the rise of the thing".] **R. H. Wheeler.** *Organismic Logic in the History of Science.* [By organismic the writer means the recurring tendency of science to be concerned with the part-whole relation, and, in particular, the tendency to enunciate laws in which the behaviour of parts is determined by the character of wholes to which they belong. A rapid sketch of the history of science from the thirteenth century to the present day seeks to establish the contention that "scientific theory has had a strikingly cyclical history. At 1250, 1650, and 1820 and now at 1935 it is organismic in intent. All previous organismic movements collapsed because they were vitalistic" but "this oscillatory character (which has been accelerating) is being resolved into an organismic position that is neither vitalistic nor mechanistic".] **E. J. Nelson.** *A Note on Parsimony.* [Suggests considerations in favour of the generally accepted but unproved thesis "that if a given set of facts is explained by two rival explanations A and B, where A consists of a single hypothesis H, and B consists of at least two independent hypotheses H_1 and H_2 , then, other things being equal, A is more probable than B". It is shown that, on certain plausible assumptions, the result follows from the multiplicative axiom of the calculus of probabilities (Keynes).] **L. O. Kattsoff.** *Postulational Methods, II.* [The first parts of this article appeared in vol. 1. Discussion of such questions as the nature of axioms, the *Entscheidungsproblem*, etc.]. **S. S. Stevens.** *Psychology: The Propaedeutic Science.* [The title is intended to imply that "psychology investigates the phenomena which determine what physics can or cannot be". (The claim is obscure. While it is apparently not asserted that specific physical laws are logically dependent upon psychological laws—for if they were, would not the validity of the former require the prior establishing of the latter?—the paper's trend does, nevertheless, suggest that the physicist must somehow take into account psychological findings regarding the behaviour of experimenting or theorising scientists). It is argued that this claim has been strengthened by the advent of relativistic science in which "all of our measurements are relative, dependent in the last analysis upon the nature of the operations which an observer is able to perform". But the notion of immediate (or, indeed, any) experience is an impediment to psychology. "Scientific psychology is operational and as such can have nothing to do with any private or inner

experience for the simple reason that an operation for penetrating privacy is self-contradictory". The atom of psychological investigation is rather the simple act of discrimination, provided that "by discrimination is meant the concrete, 'physical' reactions of the organism to either internal or external environmental conditions". But the behaviourist need not exclude non-empirical statements as meaningless. As a stimulus, metaphysics has the same kind of validity as music.] **S. Ratner.** *Evolution and the Rise of the Scientific Spirit in America*. [An interesting historical sketch, paying special attention to the neglected figure of Chauncey Wright, "the philosophic master of three American immortals: Charles Saunders Peirce, the greatest logician America has produced; William James, its greatest psychologist, and Justice Holmes, its greatest jurist."] Discussion (Correspondence). Reviews and Notes.

III. 2 (April, 1936). **E. Gaviola.** *The Impossibility of Interaction between Mind and Matter*. [An unconvincing attempt to illuminate the problem of the relation between mind and matter by reference to the duality of wave and particle theories in Physics. Interaction between mind and matter is impossible because it would involve abrogation of the laws of conservation of energy, etc., and because "mind and matter are things of different essence". "This being so, philosophers have looked for a way of avoiding the question." Three types of evasion, "materialism, spiritualism and psycho-parallelism" (Democritus, Leibniz and Spinoza) are routed in as many pages. "The only reality is the Cartesian primary fact: my existence as a consciousness that thinks. The immediate facts of my experience are constituted by the contents of my consciousness: a sequence of impressions, emotions, representations. . . . I construct systems of concepts (labels of classification) under which I order my impressions, emotions, etc. . . . One of them constitutes what is called the physical world, the other what may be called the world of the mind or the psychical world." It is interesting to notice the Pickwickian sense of 'construction', for we "cannot create anew and arbitrarily the psychical and physical concepts. . . . These concepts have been already defined according to principles of adequacy and economy". The mutual relations of definer and constructor need some explanation.] **H. S. Fries.** *On an Empirical Criterion of Meaning*. [Discussion of a paper by C. I. Lewis on 'Experience and Meaning' (*Phil. Rev.* 1934).] **L. Abraham.** *A Note on the Fruitfulness of Deduction*. [How can strict deduction be useful? "For if inference is analytic, the conclusion must, by definition, be part of the premisses; and if we are fully aware of all our premisses, we must be equally aware of our conclusion. Should the conclusion of an inference strike us as novel, it only follows that we have not been fully aware of all its premisses, and have therefore not actually performed a valid inference." A suggestion that the apparent novelty of the conclusion may be due to the redundancy of synonyms in language with the consequent possibility of translating the premisses into an unexpected form is rejected. The suggested explanation of the familiar paradox is that "while the conclusion of a deductive inference cannot be new with respect to *all* its premisses, it is perfectly possible for it to be new with respect to *any* or *some* of them—or even *every one* of them considered singly." Thus the piecemeal accumulations of everyday life, may, *in conjunction*, point to unforeseen conclusions. "There is thus no incompatibility between the analytic or tautological character of deductive inference and its usefulness as a means of extending our knowledge."] **C. A. Baylis.** *Are Some Propositions Neither True Nor*

False? [Examines the relevance of the invention of 'many-valued logics' (e.g., by Łukasiewicz and Tarski) to the question of the validity of the principle of the excluded middle. The writer insists, with justice, that the significance of a calculus, logical or otherwise, depends upon the chosen interpretation of the variables occurring in the axioms and theorems of the system. "The existence of these n -valued systems does assure us that no matter how many truth-values we find propositions capable of, we shall have at hand an abstract calculus for the ready elucidation of the tautologous laws of a truth-value logic. It does not help us at all to determine whether there are two, three, or many truth-values." The paper also contains a discussion and rejection of Łukasiewicz's suggestion concerning the inapplicability of the principle of the excluded middle to propositions about the future. "In short, recent discoveries in logic and mathematics are irrelevant to the truth of the principle of excluded middle. For that principle to be true it is necessary only that the division of propositions into true and false should be exhaustive, and whether it is or not depends on the meaning of the terms, 'True', 'false', and 'proposition'. These meanings are no doubt not entirely clear, but that that they are such as to make the division exhaustive is one of the most certain things about them."]

A. Wohlsetter. *The Structure of the Proposition and the Fact.* [An elaborate discussion, with references to Eaton, Peirce, Russell, Stebbing, Wisdom and Wittgenstein, of the statement "The proposition represents the fact by virtue of a structural identity between it and the fact." The writer, while following Russell's definition of the "structure" of a relation as the class of all relations isomorphic with the given relation, thinks it necessary to introduce the further notion of *qualitative similarity* for "the usual sense of resemblance". Thus the relation *on* is isomorphic (identical in structure) with the relation *to the right of* (both are transitive and asymmetric), while qualitative or "sensuous" similarity is exemplified in the tastes of two different brands of chocolate. As the writer himself admits, his distinction requires more elaborate treatment than he is able to give, but he is successful in exhibiting the prevailing confusion of views on this subject.]

A. F. Emch. *Consistency and Independence in Postulational Technique.* [Questions the widely accepted view that the premisses of an abstract mathematical system are indefinite, of the nature of propositional functions rather than propositions. The variables involved in the postulates of such a system should be regarded as apparent variables, and the postulates themselves as propositions with *definite* truth-values. The common method for determining the consistency and independence of postulate-systems by interpretations of the variables involved should, ideally, be replaced by some purely abstract method. But the definition of consistency and independence is a matter of some difficulty. The well-known paradoxical theorems of the propositional calculus entail that the consistency of postulates, if defined in terms of material implication, is inconsistent with their independence (for a true proposition materially implies every other true proposition). Nor does the narrower relation of strict implication (Langford and Lewis) provide a substitute. For "the properties of strict implication do not in fact coincide with those of deducibility as employed in the deductive development of logic or mathematics". In the system of strict implication, no less than in that of material implication, a definition of the consistency of p and q as meaning that p does not strictly imply the falsity of q would entail that no two logical or mathematical propositions could be both consistent and independent. The writer proposes a narrower relation of implication (p logically implies q

means "it is impossible that p true and q false is possible") and promises to discuss its properties at greater length in *The Journal of Symbolic Logic*. It will be interesting to see if he is able to produce a calculus containing no paradoxical theorems of the kind that previous systems have been unable to avoid.] **E. T. Bell.** *A Detail in Kronecker's Program*. [A useful note disagreeing with Couturat's criticism (in *L'infini mathématique*) of Kronecker's attempt to define negative and complex numbers in terms of algebraic congruences. The writer abstracts a mathematical paper by Wedderburn in considerable detail to show how, in a 'semi-field' consisting of only positive integers (constants and variables, combined by the operations of addition and multiplication) it is possible to define classes of polynomials which form a *field*, i.e., have the formal properties of directed (positive or negative) integers. This certainly seems to clear this part of Kronecker's program from the charge of circularity. It would have been useful if some indication had been given of how much of this argument is explicitly to be found in the papers of Kronecker to which Couturat refers.] **J. A. Irving.** *Leibniz' Theory of Matter*. [Attempts to interpret the theory in terms of the causal theory of perception.] **F. S. C. Northrop.** *The Philosophical Significance of the Concept of Probability in Quantum Mechanics*. [Two kinds of probability are found in physics. The measured value of a quantity does not coincide with the calculated or theoretical value, differing from it by an 'error of measurement' whose limits can be determined only within certain degrees of probability. Such probability is defined in independence of the particular branch of science to which it is applied. By contrast, the 'probability' encountered in quantum mechanics or in Gibb's statistical mechanics are more specific notions defined in terms of the basic concepts and principles of the theory in which they occur. The writer proceeds to sketch how the specific probability (for which he uses the confusing term "theoretical probability") of quantum mechanics is connected with the fundamental concepts of that theory. In so doing he emphasizes the unusual fashion in which modern theories reconcile the incompatibility of wave and particle theories. This is achieved, one gathers, by erecting an abstract system of great generality based on a selection from known physical results ("exactly described, it may be called the method of acting as if one does not know what one does know") followed by a re-interpretation, in terms of observable magnitudes, of the quantities in the theoretical system. The specific interpretation of theoretical quantum mechanics is peculiar in that "instead of defining the state of a physical system, as did Newtonian Mechanics or Gibb's statistical mechanics, in terms of a single set of theoretical measurables, quantum mechanics defines the state in terms of an aggregate of such quantities each of which has a certain probability of being observed in a given theoretical measurement of the state in question". Thus, it is held, "by acting as if we do not know what we do know we freed ourselves from accidental characteristics of what we do know, and from physical conceptions holding only for a restricted range of phenomena, and, thereby, made it possible to pass to the realm of abstract logical and mathematical forms where we found definite conceptions with the generality sufficient to account for all observed phenomena without the previous contradictions. Such is the method and the achievement of quantum mechanics." The distinction between the two kinds of probability is held to illuminate the status of causality in quantum mechanics. He concludes that the concept of causality is retained in modern physics. "No escape from the need for propositions expressing causal or necessary connections between

natural factors is to be found by an appeal to the scientific concept of probability; instead, if anything, one merely increases the number of universal propositions expressing necessary connections which must be assumed to hold absolutely and exactly." Discussion (Correspondence). Reviews and Notes.

REVUE NÉO-SCOLASTIQUE DE PHILOSOPHIE. Tome 38. Deuxième Série, No. 46. Mai, 1935. **R. Jolivet**. *Les sources de l'idéalisme* (2). [Locke's phenomenalism, as shown in his criticism of the idea of substance, is derived from an ontological error. What is really characteristic of substance in the Thomist doctrine is not that it is a kind of inert support of qualities, but that it is a capacity to subsist in itself, not in some other subject of inhesion. The real difference between the qualities and their substance does not mean that the former are separate from the second; it is not they which *change*; in change, it is substance which becomes *other*, without becoming *another*, hence Locke's criticism, which leads up to the pure phenomenalism of Hume, is a product of mere misuse of *imagination*. Berkeley's attack on 'general ideas' is a conclusive refutation of the false empiricist conception of abstraction as a *separation* of concrete elements, and his immaterialism follows as an inevitable logical consequence. Mill and Taine simply repeat the assumptions of Hume and Berkeley, and Mill's attempt to save a minimum of substantiality for the percipient mind is a failure. Bergson's philosophy is a paradoxical attempt to overcome associationist empiricism with its own weapons. He may be said to have completed the movement which begins with Ockham's Terminalism.] **N. Balthasar**. *Médiation en acte de la pensée* (1). [An account, with view to subsequent criticism, of the main philosophical thesis of M. Decoster that thinking is an 'unconditional mediation *in actu*, exclusive of all metaphysical composition'. I much regret that I am quite incapable of giving any summary of the position, as, presumably from want of acquaintance with the detailed exposition of Mr. Decoster, I find the meaning of the doctrine wholly unintelligible to myself; other readers may be more fortunate.] **E. de Bruyne**. *Réflexions sur les méthodes de la morale*. [In dealing with morality, as in dealing with any other subject-matter, one may adopt any of three standpoints, that of the phenomenologist who aims at the exact understanding of what is essential to the concrete given fact, of the critic, anxious to discover its further hidden implications, that of the systematic constructor of a 'dogmatic' philosophy. The study of moral facts too often suffers from an over-hasty application of the two latter methods before the true phenomenology of the moral fact has been sufficiently ascertained. Thus Aristotle, who spoils some of his most important ethical positions by the intrusion of a theory about pleasure inconsistent with them, and Kant, with his treatment of love and moral feeling as 'pathological', are both examples of the consequences of the neglect of a preliminary full and impartial study of the 'phenomenology' of moral facts.] **D. O. Lottin**. *Le libre arbitre au lendemain de la condamnation de 1277*. [Among the propositions condemned by Tempier, Bishop of Paris, in 1277, were several (such as *e.g.* that "will necessarily follows the judgement of the reason") aimed directly at the Thomist account of free will, on the points where it departs from the older tradition. The article discusses, with abundant documentation, the immediate effect of the episcopal condemnation on the composers of *quodlibets* down to the year 1286.] **J. Maréchal**. *Une enquête sur l'idéalisme français*. [On the recent volume treating of the subject by A. Etcheverry.] **Xavier**

Legrande. *La méthodologie des sciences sociales d'après M. Marcel de la Bigne de Villeneuve.* **W. Goossens.** *Ouvrages récents de philosophie de la religion.* Comptes Rendus, Book Notices, etc.

Tome 38. Deuxième Série, No. 47. Août, 1935. **R. Jolivet.** *Les sources de l'idéalisme* (3). [Descartes' great revolution in philosophy consists in originating the Philosophy of Immanence, which takes as its principle "the only Universe presented to knowledge is one immanent in the knowing subject". If we ask how Descartes reaches his position, it is apparently by a reaction against the Aristotelian doctrines of real essences and substantial forms. Here he is on the same ground as the nominalists of the fourteenth century, but his originality lies in the fact that he conceives the idea of reconstructing philosophy on the 'idealist' hypothesis hitherto regarded as a paradox or a 'blind alley'. Kant intended to moderate 'the pretensions' of such immanence in philosophy, and to replace it by a modest 'formal' idealism and at the same time to refute the empiricism of Hume. But what he attacked was not so much empiricism as its consequences, and the result is that, against his own will, he furnished the 'immanentist' mill with water.] **N. Balthasar.** *Médiation en acte de la pensée* (2). [The author's rejoinder, in the name of a doctrine of Creationism, to the metaphysic of M. Decoster.] **G. de Montpellier.** *À propos de l'objet de la psychologie expérimentale.* [The quarrel between behaviourists and the partisans of introspection rests on misunderstanding. All psychological analysis is analysis of behaviour, but the behaviour may be either purely external (open to the observation of others), or externalised (open only to the observation of the subject describing his own state). The partisan of introspection is apt to forget that all that he reports about himself is 'externalised' behaviour; the behaviourist forgets that what is introspected is real behaviour, and at times even fancies that the 'incommunicably' subjective does not even exist.] **L. Noël.** *Bulletin d'épistémologie.* [Critical notices of recent works on the subject. It is a pity that Mr. A. C. Ewing's name should appear here as Erving.] **A. Pelzer.** *Le nouveau catalogue des manuscrits de la ville de Bruges.* **F. van Steenberghen.** *Monographies récentes sur les philosophes du moyen âge.* Book notices, etc.

Tome 38. Deuxième Série, No. 48. Nov. 1935. **H. Thieilmans.** *La métaphysique de l'instinct.* [An attempt at an *a priori* 'deduction' of the general character of instinctive action, in its general character not unlike the similar 'deductions' of e.g. Schelling, though the metaphysical principles presupposed are naturally very different from his. The proposition to be established and explained is that instinct is characteristic of "an animate material being of the second degree". (Those of the first degree are human persons, those of the third, apparently, organisms in which nothing beyond reflex action can be discovered.) The essay is hard reading, and as with Schelling, one has an uneasy suspicion that the reasoning is not as fully independent of appeal to empirically ascertained facts as it aims at being.] **M. Thomas.** *La biologie de l'instinct.* [The zoologists are unanimous in rejecting Behaviourism. A careful study of insect life shows that they are justified, and that we cannot account for the behaviour, e.g., of 'solitary' spiders without invoking instinct in the sense of "an hereditary virtual knowledge of a specific plan of life."] **J. Dopp.** *Une forme personnaliste de l'idéalisme : la philosophie de M. Lachèze-Rey.* [On L. R.'s work, *Le Monde, le Moi et Dieu*. The writer is praised for his resolute Theism, but criticised for a hostility to realism due to a confusion between realism and materialism, or *chosisme*.] **M. de Corte.** *L'Ontologie*

existentielle de M. Gabriel Marcel. [An elaborate study, at once sympathetic and critical, of the thought of a new Hegelian who has thought himself out of Hegelianism into a kind of realism. The essay is very difficult reading, but the thought of M. Marcel itself appears to be exceedingly difficult to follow.] *Études Critiques.* **L. de Raeymaker.** *Travaux récents de psychologie.* **W. Goossens.** *Ouvrages récents de philosophie de la religion.* **J. Jacques.** *Abstraction et Analogie.* **C. Ranwez.** *La Controverse gnoséologique en Italie.* Book Notices. Chroniques. Répertoire bibliographique.

Tome 39. Deuxième Série, No. 49, Février, 1936. **A. M. Mansion.** *La physique aristotélicienne et la philosophie.* [Our customary distinction between philosophy and science is a distinction between knowledge of things through their ultimate and through their proximate causes. Aristotle, who identifies 'philosophy' and *ἐπιστήμη*, does not recognize this distinction, and thus for him 'science', in the modern sense, does not exist. He might have been led to recognize it by reflection upon the status of the mathematical studies which had already attained a real degree of independence, but for his prejudice that mathematics involve a further degree of abstraction beyond that practised in 'physics'. He should have regarded those branches of physics which had been already 'mathematized' as so many sciences, each dealing with the complete study of the phenomena of a well-defined field, but he never takes this view. In his biological and psychological work, again, he never distinguishes clearly between the overhasty attempt to apply within this field principles, or supposed principles, of wider metaphysical and cosmological significance, and the specific solution of problems of detail by appeal to specific 'proximate causes'. His work suffers partly from his own lack of aptitude for research into the quantitative aspect of the phenomena, partly from his natural inability to carry through the gigantic programme of a complete explanation of the whole universe from 'ultimate causes'. Hence his example proved in many ways disastrous for the future of scientific inquiry.]

D. Salman. *Le conception scolastique de la physique.* [Physics to the great schoolmen inevitably meant something quite different from what we call by the same name. Its object is to explain a *sensible* reality, and it is assumed that the explanation must be given in terms of the simplest perceptible sensible qualities. The great discovery on which modern physics rests is that the whole field of the sensible is really 'mental'; the explanation of nature has to be sought in terms of realities which cannot be so much as imagined. Hence we fall into error in judging of the scholastic physics when we treat it as an unsuccessful attempt to do the same thing which we now do more successfully in *our* physics.] **F. Renolrte.** *Physique et philosophie.* [The essential procedure of physics is this. For a 'sensible quality' it substitutes a measurement obtained by a definite apparatus in a definite manner (*e.g.*, for a felt temperature a definite expansion of the thread of mercury in a thermometer). By this method we replace the qualitative variety of natural process as revealed to the senses by a vast scheme of numerical correlations between "irreductibles". We then seek to discover more simple and ultimate formulæ from which the whole body of such recorded equivalences could be deduced. The task is unending, as we can never be sure that our assumed list of irreductibles is either complete or free from superfluities, or that new methods of measurement will not supply us with a different set of equivalences. Philosophy has a definite service to perform for physics since physics presupposes the existence of a measurable datum and then raises

the question, which it does not answer, "What are the necessary conditions of the possibility of a various and changing spatio-temporal externality?" (The answer suggested is "prime matter in composition with substantial forms".) Physics has a service to perform to philosophy. By its continuous criticism of the notions of 'common-sense' it reminds the philosopher that, in dealing with the material world, there is only one question on which he can speak with assurance, "What are the necessary conditions of a physical experiment?"

Y. Simon. *La science moderne de la nature et la philosophie.* [The old rivalry of science and "faith" seems now to have given place to a conflict of science with philosophy; the modern man of science is willing to recognize the rights of religion, but not those of philosophy. This is because he assumes a position of epistemological monism; he holds that there is only one order of knowables and one method of arriving at knowledge of any part of it. But the unity of science is, in fact, only analogical; there are different degrees of reality in objects, and consequently there must be a plurality of sciences and scientific methods. This is the key to the true answer to the question whether 'scientific objects' are simply useful fictions. The element of permissible fiction in a scientific theory depends upon the ontological status of the objects studied; it is only in pure mathematics that it is possible to be wholly indifferent to the existence or non-existence of the object.] *Études Critiques.*

A. Mansion. *Quelques travaux récents sur les versions latines des Éthiques et d'autres ouvrages d'Aristotle.*

F. Grégoire. *Travaux d'histoire de la philosophie ancienne.*

J. Dopp. *Ouvrages récents d'histoire de la philosophie moderne.*

Chroniques. Répertoire bibliographique.

X.—NOTES.

JULIUS STENZEL AND CONSTANTIN RITTER.

Platonic scholarship in Germany has sustained two severe losses in the last few months. The first was the death, in December, 1935, at the early age of 52, of Prof. Julius Stenzel of Halle (formerly of Kiel), author of *Zahl und Gestalt bei Platon und Aristoteles* (1924; second, enlarged edition, 1933), *Platon als Erzieher* (1928), *Studien zur Entwicklung der Platonischen Dialektik von Sokrates zu Aristoteles* (1931), etc. The second is the death, at a riper age, on 16th April, 1936, of the veteran Platonic scholar, Prof. Constantin Ritter of Tübingen, the well-known author of a long series of works devoted partly to the exposition of Plato, partly to the fixing by stylometric methods of the relative chronology of the Platonic dialogues. It may be sufficient here to mention the names and dates of the chief products of Dr. Ritter's life-long devotion to the great Greek philosopher: *Untersuchungen über Platon* (1882); *Platons Gesetze: Kommentar zum griechischen Text* (1896); *Platons Gesetze: Darstellung des Inhalts* (1896); *Platons Staat: Darstellung des Inhalts* (1909); *Neue Untersuchungen über Platon* (1910); *Platon, sein Leben, seine Schriften, seine Lehre* (vol. i, 1910, vol. ii, 1922); *Die Kerngedanken der Platonischen Philosophie* (1931); *Sokrates* (1931); *Platonische Liebe* (1931). Dr. Ritter also translated the *Phaedrus* into German for Heiner's *Bibliothek der Philosophie*, and for years contributed to Bursian's *Jahresbericht* elaborate monographs on the literature of Platonism in the chief European languages. Germany has lost in him the oldest and most indefatigably industrious of her exponents of Platonism, as in Dr. Stenzel she has lost an eloquent champion of the great Platonic educational ideal as well as a brilliant investigator of the process by which the Platonic philosophy took the shape in which it is the subject of the often perplexing criticisms of Aristotle's *Metaphysics*. Both scholars were always ready with generous recognition of contributions to Platonic studies in lands outside Germany, and the death of both will be deplored beyond the bounds of their own state.

"A MATHEMATICAL TREATMENT OF THE RULES OF THE SYLLOGISM".

The Editor regrets that in Mr. H. B. Curry's article with the above title, in the last number of *MIND*, p. 209, the following corrections require to be made:—

P. 210, l. 14, for "null class" read "null element"

l. 27, for " $f(a, c)$ " read " $f(c, b)$ "

P. 216, l. 12, after "might be O," add "or $a = b = 1$,"

l. 39, for "0" (numeral) read "O" (capital letter).